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Timothy—Spring and Summer Seeding.

Timothy and clover are in a large degree the cultivated grasses of the northern section of the Union, though some attention is given to June or blue grass, red-top, fowl-meadow, orchard grass, etc., yet hundreds of farmers sow only these two varieties. In our own experience, white clover, red-top, and June grass, come in of themselves, and sometimes very luxuriantly, so that perhaps they need less attention than the kinds first above named. Our present purpose however, is to remark more particularly on the *season* and *manner* of seeding land to timothy, so as to produce the most desirable results. This is ever an important question, but of late it has become of more special interest, as farmers are more generally seeking to combine stock, grain, and fruit growing—a "mixed husbandry" not likely to fail at all points, however unpropitious in season, market value, etc., one or more may be.

Upon this question of seeding, numerous experiments have been tried by those who have given attention to the subject—spring, summer, early and late autumn, have been chosen for sowing timothy and kindred grasses—and with ever varying results, influenced by the season, manner of sowing, and accompanying crop.

1. Spring seeding with oats, barley, or spring wheat, is sometimes attended with excellent results; but as a rule the failures predominate. For this there are several causes. Spring grains, if of luxuriant growth, as they are likely to be on land properly fit for stocking to grass, shade the ground very perfectly, discouraging the growth of grass seeds even if they vegetate favorably. These grains are harvested at midsummer, removing this shade, and should the weather prove hot and dry, exposing the grass to heat and drouth they are illy prepared to withstand. If, as is frequently the case, the grasshoppers are abundant, they injure newly seeded grass lands very materially—we have seen them entirely stripped of verdure by this insect. On soils in a low state of fertility, the grass seed suffers from starvation, the lesser plants yielding to the larger, and being a feeble growth perish readily from drouth and insects.

Successful spring seeding most usually results in wet seasons—those too wet for grain proving favorable to grass, and giving greater chance for its growth. Again, when plenty of seed is given, early and upon favorable soils, and no drouth occurs, good results follow.

One of the most successful methods of seeding with mixed grass on spring grain, we have ever seen practiced, is to sow early in spring, with barley, about double the usual quantity of clover and timothy seed, mixed together. Sow before the last light harrowing, or afterward following with the roller; which in most cases covers the seed sufficiently and leaves the soil in a good state for the growth of the grass crop. The same success attends with oats or wheat, if sown as early, and in all cases something depends on the season which follows. The product of land so seeded is usually large—the clover (especially if dressed with plaster,) giving considerable fall feed, and a good crop of hay the next year, and if desired, a fair product of clover seed. The timothy does not appear largely until the second year, and in case the clover suffers from the winter, takes its place. By the third year the crop will be mostly timothy, and if it is desired to remain in grass for some time, should receive some fertilizing application.

This mixture of grass furnishes more hay and pasturage than either alone, and one of our best farmers recently told us that he should practice it invariably on all his land. He was sure of a fair crop of grass, if the seed took, even if the winter should kill out the clover—a frequent case on undrained clayey soils.

2. Summer seeding is but little practiced, save in the New England States, where timothy and red-top, and some times clover, are often sown after the last hoeing of the corn in midsummer. Level culture is practiced, and immediately after hoeing, the grass seeds sown, and then either raked or hoed in by hand. Usually two crops of corn are grown in succession before seeding, each well manured and cleanly cultivated;

and should the season prove favorable, good grass crops usually result. If the weather is hot and dry, failures are most frequent, but the land is well prepared for autumn seeding, of which we thall speak in continuing our discussion of the subject.

The object of summer seeding is to get a grass crop as soon as possible, but unless the summer is cool and moist as above remarked, disappointment results. We think there is more risk of loss at this season, than either spring or fall, though when successful, a larger first crop is given than from fall sowing.

Manures.

From early historic periods we learn that the manure of animals was applied to the land for the purpose of increasing the amount of cultivated crops, and also for preserving the fertility of the soil. That the application of manure to the land would effect these two objects, was a well known fact thousands of years ago; and in view of these *facts*, the manuring of cultivated land has been practiced from that to the present time. But why these things were facts, were not fully understood till within a few years past. But the analyses of competent chemists have shown that a fertile soil contains some nine or ten elementary substances essential to the healthy growth of plants, more especially to such as are adapted for food for the various tribes of animals. These inorganic elements of plants, as they are termed, exist in fertile soils in an available soluble form, so as to be easily taken up by the rootlets of plants, and *these*, in combination with four other gaseous or organic forms of matter, become assimilated and organized into that endless variety of plants that we see around us. These various processes and products are all the results of those natural laws that govern the vegetable kingdom.

Analyses further show us that those various elements that compose the plant are also required in the composition of the animal; but the animal has not been endowed with power to take directly from the soil and atmosphere those necessary ingredients that are requisite for its growth, sustenance and existence. It is only through the intervention of plants, directly or indirectly, that the animal obtains from the soil and the atmosphere the necessary food for its subsistence.

Experience has thousands of times demonstrated the fact that if an originally fertile soil is cropped year after year, and the produce annually removed, and no returns made to the land in the form of manure, the soil will, sooner or later, become nearly sterile. The reason of this is so obvious, that all understand it. Experience has also thousands of times proved that the same impoverished field can be restored to its original fertility by a liberal and judicious use of farmyard or other manures. The reason of this is also very plain. The manure contains a large per centage, in an available form, those very substances extracted from the soil, (by the removed crops,) in addition to much derived from the atmosphere.

When cattle are fed on hay, grain and roots, some portions of the food go to replace the daily waste going on in the system, and perhaps to add a trifling amount to the bone, fat and muscle of the animal, while a larger portion of the carbonaceous matter of the food is required for the purpose of furnishing heat, respiration, &c., and passes off from the lungs in the form of carbonic acid and water; but, after all, most of the nitrogen and earthy elements of the food are voided in the liquid and solid excrements, and these excrements, as food for plants, are valuable in proportion to the richness of the food upon which the animal subsists.

The manure derived from cattle fed on bog hay and rye straw is always of poor quality—that from cattle kept on good English hay and clover being much better—with a liberal allowance of Indian meal, or oil cake, with the hay, better still. But the manure derived from animals and birds that feed wholly on "flesh or fish," is vastly richer in the essentials of a good manure, than that derived from vegetable food. Peruvian guano is an illustration of this; it is the large per centage of nitrogen and the phosphates, that gives such intrinsic and practical value to a prime guano. The birds depositing the guano subsist wholly on fish.

"From extensive series of analyses, it has been ascertained that in a given time, the fæces of a man will yield 4¼ lbs. of nitrogen; the urine voided in the same period, will yield more than 10¾ lbs. Of phosphates, the fæces in the same time, will give 1⅛ lbs.; the urine contains 4¼ lbs. Of inorganic matters, (the ash or salts,) fæces, 2½ lbs.; urine, 12 lbs."

Probably the dung and urine of cattle may not bear the same relative proportions as those of man. According to Boussingault, a cow voids in a year 6,570 lbs. of urine, containing 773 lbs. of solid matter, and of nitrogen 29 lbs., capable of yielding 35 lbs of ammonia. Sprengel makes all the figures much larger. But taking the smallest estimate, and probably the urine voided by a herd of cows, if it could all be saved and applied to the land, would be found of more value than the solid portion of the manure, at least as far as the salts and nitrogen are useful. This seems to be unknown to farmers generally, or if known, is unheeded by a large majority of them. In many sections of the country, scarcely one farmer in ten uses any means to save the urine of the cattle during the time they are housed through the foddering season; the cattle lay upon the bare floor of the hovel without litter or bedding, the urine drains through the cracks in the floor and is lost; the manure is thrown out at the doors or windows, exposed to the washings of rains and melting snows, thereby losing much of its valuable and soluble portions. If carted out in the spring, it is of a mortar-like consistence, and cannot be evenly spread over the ground, as it should be to effect the greatest good.

Others have barn-cellars in which the manure is deposited. But many farmers use no bedding for their cattle; the manure and urine are thrown into the cellar, but the fresh dung can imbibe no more liquid, and of course the urine drains off or soaks into the ground—this is a serious loss. Other farmers make use of muck, litter, or other absorbents, to take up the liquids. If straw, refuse hay, or sawdust is used, there is great danger of too much heat in the manure heap—this is attended with great loss of ammonia and other valuable gases. If the manure is frequently spread about, and a few hogs kept upon it, or young cattle occasionally turned in, so as to tramp it solid, decomposition will go on slowly, with little escape of gases. But under this management, the coarse litter does not become sufficiently rotted to allow of its being evenly

spread if carted on to the land in the spring. However, this may be remedied by having all the straw and other long litter used for bedding, cut in a straw or stalk-cutter. There would be some labor in this, but we think it would pay well.

Partially dried, fine swamp muck, makes a capital bedding for cattle in the hovel, as well as an absorbent, and a divisor of the mortar-like manures. Good swamp muck may be profitably used with the winter made manure, at the rate of two or three of muck to one of manure. At this rate there could be but little, if any escape of gases, by over heating of the mass, or waste of urine by draining off. With many farmers it is difficult procuring swamp muck; but most have wood lots, from which, in autumn large quantities of leaves and leaf mold could be obtained; the leaves from hardwood trees and mold derived from the decomposed leaves, are among the very best materials for mixing or composting with animal manures, that can be readily obtained. The fertility of newly cleared land, is, in a great measure, due to the vegetable mold derived from the fallen and decomposed leaves of trees. The leaves of trees contain a much larger per centage of ash (inorganic matter) than the wood. Prof. Johnston says, "the wood of the elm contains less than two per cent, while its leaves contain nearly twelve per cent.; the wood of the oak, leaves only one-fifth of a per cent., while from its leaves four and a half per cent., or 22 times as much are obtained. The leaves of the willow and the beech also contain about twenty times as much as the wood of these trees does, when it has been dried under the same conditions."

The inorganic matter found in the ash of the leaves of trees, is precisely the same that is found in the ash of our cultivated plants, but not in exactly the same proportions; these proportions differ in different varieties of plants. These inorganic constituents are much more soluble in the decomposing leaves, than they are, as found in the purely mineral matter of the soil, from which they were originally derived; but in addition to the great amount of inorganic matter in leaves, "they contain three times as much nitrogen as barn-yard manure, and are, therefore, nearly three times as valuable." From the foregoing, we get a pretty correct idea of the manurial value of leaves and leaf mold.

While the ground is covered with snow, the leaves and vegetable mold from the woods cannot be obtained; but as soon as the snow is off and the frost is out of the ground, farmers can most profitably devote a few days time in early spring in putting up large heaps of the "rubbish" in their wood lots. Put up in large masses, the leaves would mostly decompose during the summer, and the whole would become a vegetable mold, far more valuable, pound for pound, than swamp muck, lighter to cart, and an equally good absorbent of the liquids of the cattle hovels. If the wood lot is too rough to collect the mold in carts or wagons, it should next autumn be put into as large heaps as can be conveniently done, and if to be had the heaps should be covered with branches of evergreens, so as in a measure to prevent freezing. Soon as there is snow enough to use the sled, it will be best to haul the *material*, and place it in the barn cellar, or a shed, where it may be daily obtained as bedding for the hovels, stables, hog pens, &c. We have collected large quantities of wood scrapings, both in autumn nnd winter, as above described, and are satisfied we were expending our money in this way, at a much better profit than in the purchase of guano, super-phosphates, poudrette, or ta feu, &c., &c.

Broom Corn.

Messrs. Editors—I noticed in the Country Gentleman of July 1st, page 411, that E. M. S. "*wishes some one to furnish an article on the culture of broom corn, to enable one unacquainted with it to grow it successfully.*" I have had no time till the present to comply with his wishes, and if I had, it would have *then* been too late for any practical benefit to him the present season; but our friend can take these few hints, and if rigidly put in practice, he may profit by them another year.

As to soil, any good, rich soil, the more free from stumps and stone, the better, such as prairie or river bottom land. Better also to be free from corn stalks, straw, &c., as they are rather a nuisance in planting and cultivating. Plant any time in this latitude from the 10th of May, to 15th of June, in rows four feet apart, and in drills so that a seed will be dropped from three to four inches apart. These directions are for the large kind of broom corn which is the best, and for a rich soil. If the smaller kind is planted and the soil not very strong, *then* the rows may be about three feet and four inches apart. (The large kind produces the best brush and is more free from the green lice or bug, and burn stains.)

The tools wanted are seed planters, cultivator, shovel, plow and corn plow. It is important that the rows or stalks of broom corn stand in as perfect a line as possible, in order to save labor with the hoe, and that just enough seed should be planted, for if too much is planted, then it has to be cut out with the hoe or pulled out by hand, (which is a back-aching business.) Now in order to plant it right, procure Emery's seed planters, take out the lead screws from the cylinder and plug up the holes with any hard wood, and smooth off the plug nicely, even with the surface of the cylinder, then take a half inch bit and bore about one-twelfth of an inch, such a cavity or bucket as will hold eight or nine seeds, (serve the three buckets in the same way.) Then try the machine before planting with it to see that it drops the right quantity of seed. For this purpose take it on to a floor, or carpet is better as seed bounds, or you may try it on smooth ground. Measure the distance and count the seeds dropped, and alter if necessary, till it drops on the average one seed to three or four inches, when the planter is ready for use.

The ground having been recently plowed and harrowed smooth, mark it out with a light marker. One horse will draw two planters with ease, with a man to hold each planter. They may be fastened at the right gauge, on a cross piece and thills for the horse. When your corn is planted, if the ground has been long plowed, and is inclined to weeds, it should be harrowed over. This may be done three or four days after planting. Then the ground should be rolled with a heavy roller, (unless wet,) which will crush all the lumps and leave it smooth, which is an important consideration, as my experience has taught me.

As soon as the corn is up and the rows show themselves, go through with a cultivator and scrape the earth and weeds away from the corn. For this purpose take a common five-toothed cultivator, and take out all except the fore tooth, and put in four others (like mould-boards or little plows) right and left. This can be done at a plow-shop for about three dollars, (and this instrument should not be dispensed with when much is to be raised.) The hind tooth of this instrument can be run within an inch of the row, so that a space will be left only two inches wide when planted with Emery's planter. Put this through twice in a row, by following up one side and down the other. Next run through the shovel-plow; which if done in time, will hill up the corn a little and cover all the little weeds in the corn. Lastly, put through the corn-plow when the corn is waist high, and turn the furrow towards the corn. This is generally sufficient cultivation, and little or no hoeing need be done, or pulling out, except at the ends of rows where too much seed has been dropped in turning about.

Now for cutting, scraping off the seed, and curing the brush, &c, I fear that I should occupy too much space in your paper to describe the process. But I will just say that the corn should be cut (except what is wanted for seed,) when the seed is in the milk. The seed should then be immediately scraped off, and the brush put up under cover, in a dry-house made for the purpose, where it will cure in about a week, when it can be packed away and more green brush put up in its place. In which case the brush will all be green and bright, and worth a third more than bleached, stained and frost-bitten brush. Much more might be said, but I fear I am too tedious already. M. *Davenport, Iowa.* [Another paper from our correspondent, with any further details on this subject, we are sure would be read with great interest. Eds.]

A Cheap Western Fence.

I wish to speak about a Kansas Fence, so that all poor men as well as the rich, may have a good fence if they have a little timber on their land and labor in themselves. The fence looks something like the following

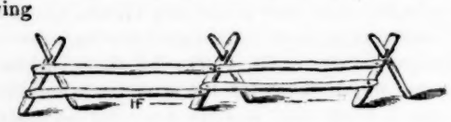


Fig. 1.

The strong timber of any kind, is morticed one hole on the top, and stands *thus* (fig 2.) *on* the ground. Then the next piece is made to fit, and when put up looks thus, (it may be crooked,) (fig. 3.)

Fig. 2.

Fig. 3.

Then anything long enough, *rails*, *poles*, boards &c., may be nailed on, one nail each end, looking thus when nailed, (fig. 1.) Then the pieces morticed, put through, save a nailing, so that but two rails are nailed on, the rider rests on the crotch formed by the mortice, (fig. 4.) The whole leans *outward* or *inward* as the owner desires; and all *on* not *in* the ground. When put down, sufficient can be done by striking down the ends to give it hold.

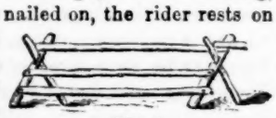


Fig. 4.

The fence can be stayed to prevent blowing down (fig. 5.) thus, in the fence, say every five or six rods.

Fig. 5.

Now the advantages of this fence are—every kind of piece can be used, long for rails, shorter for mortice posts, still shorter for stays; it can be *moved at any time*, is very substantial, and all a farmer needs to buy is nails. He can make it as high as desired; and a fence against hogs with another rail if needed. I have calculated the expense, and I think this is a *stronger, quite as cheap*, and much more durable than the Winegar fence, or any other I ever saw. It is *heavy*, very *strong* and must be *lasting*. This might be put up with the annealed wire instead of nails, where the wire is cheapest. The ends need chopping thin enough for spikes, if beavy timber is used, and all kinds can be. I still think Kansas, with her salubrious air, rolling prairies and oak studded bluffs, is the finest country I ever saw. John Doy, M. D. *Kansas Territory.*

On the Composition and Value of Barley.

Recent *scientific* analyses of this grain demonstrate that it possesses high value as a feeding substance,—a fact which has been discovered by some of our more discriminating farmers, from observations made during *practical* trials of it. Our "constant readers" will probably recollect the testimony to the value of barley which one of our most observing, judicious and valued correspondents, Mr. John Johnston, has given to the public, on several occasions, through our columns. In our issue of Dec. 3, 1857, after remarking that almost all Western New-York was proposing to sow barley the next spring, and that it seemed probable that it would pay them better than wheat, Mr. Johnston makes the following statement:—"Barley will and does make excellent beef, mutton and pork, but in beer it is worse than wasted. There is no difficulty in making a two-year old steer weigh from 1,100 to 1,200 lbs. live weight, by feeding thirteen to fifteen bushels of barley meal from a calf a week old until he is two years old, with good pasture in summer, and clover hay the first winter, and cornstalks or hay the next winter, with about ten bushels of the meal, which is much better than making beer. Farther, nothing is better than barley to fat sheep."

We indulge the hope that this testimony will have some influence upon those farmers who have raised crops of barley the present season, and that they will govern themselves accordingly in disposing of this grain, preferring to feed it to their stock and convert it into meat, manure, &c., rather than sell it to those who will manufacture from it "a drink to stupify a portion of the community."

Before chemists had investigated the composition of barley, or found it rich in nutritive matter, plain, practical people had discovered that it was an excellent food for man as well as for beast. Wheat having heretofore been so very abundant and cheap in this country, barley, as well as some other grains in common use in some other countries, has been undervalued and neglected as an article of human food. A glance at some of the statistical returns and tables relating to the breadstuffs consumed in Great Britain and Ireland, will show that barley is largely used in these countries

for human food. It might be used more extensively in this country with advantage both as to health and economy; and it probably will be so in the course of a few years. Among the several modes of employing barley for human food, we find one favorably noticed in the recently published treatise, entitled "*The Farm*," by Fowler & Wells, in the following language:—"In the form of *pearl* barley, which is the small round part of the kernel that remains after the skin and a part of the seed are ground off, it is excellent when cooked in the same way as rice—either simply boiled or in puddings." A trial of this might be easily made, and would be relished, we presume, by not a few.

But we are wandering a little from our main object in taking pen in hand at the present time, which was to give a compendious statement of the results of the most recent and reliable analyses which have been made of this grain, and to show from its composition that it deserves a higher rank than is usually assigned to it as an article of food, whether for man or beast. Any one who will compare the composition of barley with that of other grains, will see that it bears a high place in nutritive value. In the proportion of albuminous compounds it stands on a level with wheat grown in the same climate; and as the nutritive value of grains and other food is usually estimated according to the proportion of these compounds rather than according to that of the starch and other respiratory elements contained in them, it follows that barley has not hitherto been estimated as highly as it deserves to be.

Twenty analyses of different kinds of barley were recently made by Dr. Anderson, Chemist to the Highland and Agr. Soc. of Scotland, the details and results of which have just been published in the Transactions of the Society. From these it appears the average amount of oil in barley is about four per centum;—that the albuminous compounds (gluten, albumen, &c.,) or nitrogenous constituents ranging from about 7 to about 11, have a mean of about 8 50, which approaches very closely to 8 75, the number deduced from four analyses by Mr. Lawes; and that the amount of respiratory elements (starch, sugar, &c.,) was very nearly 67 per cent., including the oil which, as above stated, amounted by itself to about four per centum.

A comparison of these results of the most recent and reliable analyses known to us, with those of former investigators of the composition of this and other grains used as food, may afford some conclusions of an interesting and also of an instructive nature.

The Bots in Horses.

Eds. Co Gent.—Permit me through the columns of your valuable paper, to make known a remedy for "Bots" which I regard as much of a "specific" in that disease, as pink root or Fahnestock's Vermifuge for worms in children.

Sulphuric ether, two ounces,
Laudanum, two drachms,
Warm water sweetened, one quart.

Drench the animal, and repeat the dose if necessary in an hour, to be followed two or three hours afterwards, with a good dose of linseed oil. And if the above remedy should prove as successful in the hands of others as it has with me, many fine horses will be spared to die of old age. Bullitt. *Shepardsville, Ky*

Transplanting Small Trees.

It has been a very general, almost universal desire among tree-planters, to have large-sized trees from the nursery One person about to set out an orchard, wrote, "Send me *man* trees. I do not want puny little children—but large, full-grown specimens." Another said, "I want the largest trees you have—I don't care much what kind they are—but give me tall ones—if a rod high, all the better." "But," the nurseryman replied, "smaller ones will be better in five years than these." "I don't care, I want big ones; I may not live five years, and I want fruit *now*." Three or four years after, the same planter called again. Without waiting for an inquiry, the nurseryman immediately remarked, "Well, I have some fine large trees which I can furnish." "Don't want 'em! don't want 'em!" was the answer, "I've had enough of large trees—they have cost me ten times as much labor to set out as the small ones I took from necessity. They have not grown one inch; are just the same size I bought them, although I have doctored them and nursed them, and they have borne me only a very few of half-grown worthless fruit. The small trees have already outstripped them, and have begun to bear large, excellent specimens."

These experiments have now become so numerous that a change in the opinion of planters has generally taken place, in relation to the size of trees. Where twelve feet were formerly demanded as a desirable height, five or six feet are now quite as satisfactory, and some find still smaller ones to do better. At a meeting of the Fruit Growers' Society of Western New-York, held at Rochester a year ago, this subject was fully discussed, and none, who had ever tried the experiment with large and small trees side by side, could be found who preferred the former. Many instances were related, and in every case without exception (good culture being given,) the small trees soon outgrew the others, and were not only larger, but incomparably more vigorous and thrifty. Two year apple trees and one-year peach trees were preferred by some of the best cultivators present, to any of larger dimensions. And in addition to these advantages, the smaller trees are almost sure to survive transplanting, with scarcely a loss of one in a thousand; while the extra large ones, the roots of which must be greatly mutilated in removal, die by scores. The labor of digging up the large trees, the cost of transportation on them, and the cost of resetting them, are all several times greater than with smaller ones. Where they are to be sent some distance by railroad, the increased cost of conveyance, as well as in risk, and in packing, is greater than a hasty observer can have any idea of. A tree, for example, which is twice the height and diameter of another, is greater in weight in a cubic ratio. If a hundred of the smaller weigh two hundred pounds, one hundred of the larger will weigh eight hundred pounds, or nearly half a ton—the cube of two being eight. A single season's growth will often make this difference in the nursery—but many years, after being checked by removal when large. There seems, indeed, to be every reason why trees should be removed small, and every thing against the practice of leaving the work till they attain large size. Sir Joshua Reynolds said if he were to paint a picture of Folly, it would be by representing a boy climbing

over a high wall with an open gate close at his side. Had he lived now, he might do it with equal effect, by representing a purchaser selecting large trees at a nursery, and rejecting the young thrifty ones.

There is only one instance in which the larger trees can have any advantage, or can maintain it for two or three years,—and this is where both large and small are treated with total neglect after setting out, so as barely to survive and not to grow at all. Both remaining stationary, the larger ones will of course maintain their superiority. But all good cultivators discard such treatment.

The practice of copying English customs, has in this case had an especially pernicious effect. In Britain, the moist climate favors the removal of larger trees than can be safely transplanted here. The experiments of Sir Henry Stewart, in Scotland, in manufacturing a park of trees to order, thirty or forty feet high, and the publication of a work giving the details of his experiment, have done a great deal of harm. The park, after the first year or two, presented a very shabby, thriftless, and stunted appearance; but even while this practice was at the height of its popularity, that far-seeing and skillful culturist, J. C. Loudon, asserted that with five years' time and with deeply trenched land, he would agree to produce a finer effect with small trees, subjected to the best treatment, than any that could possibly be accomplished by the removal of large ones at the same time.

New and Profitable Crops to Raise.

Chicory—*Cichorium intybus.*

This is a perennial plant of the easiest culture, and comes well on all soils, and is used for several purposes. First—it makes a very valuable fodder, cows, oxen, and sheep being very fond of it; horses and mules also eat it—and it will produce from four to six tons per acre in one season. It can either be pastured, or mown and fed in the stable green, three or four times per year, and the plant will spring up again three or four times in a season. No other plant will bring such an amount of fodder for cows, except lucerne. It can be sown in the spring, or in August or September, either by itself or with clover, wheat, rye, oats or barley; in either case sow five to six lbs. per acre—it makes a good hay mixed with clover. 2d. The young shoots make a very good eating salad early in spring; it is also a great ornament to the flower garden, from its numerous delicate light blue flowers.

But 3d. The greatest use and most profit derived from Chicory, is to make coffee from the roots, for which purpose it should remain in the ground three, four or five years, according to the amount desired; in the fourth or fifth year, the roots, which in color and appearance are much like a parsnip, will attain a very large size. I have some now growing four years old, the roots of which are about three feet long, and as thick as my wrist, and that in a very light sandy soil, and not manured; at such a rate one acre would produce at least forty tons of roots, which, when taken up, should be cut in pieces by a cutting machine, and roasted in an oven, until they assume the color of roasted coffee, then ground fine in a mill or rollers, packed either in small paper parcels of from a half to one pound each, or in casks in bulk and sold wholesale. The present price is from three to five cents wholesale, per pound, and retail eight to ten cents.

By drying, the roots will lose five-eighths; suppose now, that one acre at the end of three years or even four years, should only produce thirty tons of fresh roots, or 60,000 pounds; by drying it will be reduced to eleven and a quarter tons, or 22,500 pounds, which at three cents only, would be $675; and if we take all expenses of seeds, labor, taking up, cutting up, drying, grinding and packing, at $150 per acre, which is too large an estimate, it would still leave $525 profit per acre, besides the forage crops, which are of great value to the grazier. The roots afford beside a good food to fatten swine on, and they are fond of them.

Chicory is now very extensively imported into all parts of the United States, from France, Belgium, Germany and Holland, and is extensively used here, particularly by our foreign population, the Dutch, French, &c., who mix the Chicory with their coffee, in the proportion of one-half; it has the same taste and aroma as coffee, and it imparts also a slight diuretic and pectoral quality to it, so that it is besides very wholesome. Some use it exclusively as coffee.

For seed and further particulars, I can be applied to, directing to me at the post office, Philadelphia, where I am very frequently. F. A. Nauts.

Fattening Hogs and their Manure.

To give hogs a start, when first put up for fattening, there is in my opinion no better food than good ripe pumpkins, boiled and steamed with a moiety of potatoes, and the whole well seasoned with meal scalded in and mixed with milk. There is a sweetness in the boiled pumpkin which is very attractive to his pigship. Indeed all the trouble with this kind of food is, that it is difficult to get enough to supply their wants. The writer has fed to a pen of 20, two kettles, of 60 gallons, per day, for some two weeks. I think to commence on this is even preferable to hard corn.

While upon this subject, allow me just to suggest how large an amount of good fertilizing matter is usually thrown away in feeding our pork. The common course is to have an enclosed pen for the swine to eat and sleep in, and all the manure made usually goes into an uncovered back yard—probably a real mud hole, where the manure made from feeding a large quantity of grain, is allowed to go to be leached and evaporated by the rains and sun; and when we come to get out this valuable compound the next season, to apply to our soil, we find it like the Irishman's flea—not there. Now we all talk about the value of swine's manure, and with truth, for it is indeed supposed to be more fertilizing than that of any other animal. This being so, why not endeavor to save it, and not actually *throw* it away in the manner described? If no better remedy presents, just make a temporary cover to the hog-yard, of rough boards, or anything that will keep out water, and just supply the pigs with plenty of material to work up—muck, turf, straw, weeds, leaves, or indeed almost anything of a decaying vegetable nature, and the thing is done—when perchance the next season you will find that instead of five loads of leached manure, you will have just four times the amount, and a little better article at that.

Now, brother farmers, is this mere theory, and as such, unworthy of a trial—not worth the time and expense? We all know "the more manure, the better crops," and will not a course of this kind tend to enhance the manure heap? W. J. Pettee. *Salisbury, Conn.*

The Indian Rice—Zizania aquatica.

BY PROF. ALFRED L. KENNEDY, M. D.

The eminent French agricultural reformer, GASPARIN, was right when he took for the watchword of himself and his followers, *Varieté*. Variety of production and its consequence, variety in diet, ought to be the aim of every American farmer. The milk of animals, of all the substances provided by nature, alone contains all the principles, and in due proportion, which are essential to animal development. No one vegetable does. Even the potato, rich as it is in nourishing and in easily digested principles, when too exclusively cultivated, became a curse to Ireland. Not less disastrous to America will be the more stimulating and less easily digested Indian corn, should it become as there is reason to fear it may, almost the sole farinaceous food of large communities in the Western States. Hog, the other standing dish, is not a compensating diet. The hog itself is corn-fed—a sort of metamorphosed maize. A metamorphosis greater, it is true, than corn-bread, johnny-cake, hominy, slappers, mush, grits or corn-dodgers, and quite beyond the "chemistry of the kitchen," yet a metamorphosis which the *chef de cuisine* might not inaptly term *maïs animalisé*.

The Southeastern States bordering on the Atlantic and the Gulf, have in the common rice, *Oryza sativa*, a cheap substitute or rather *alternate* for the Indian corn. To the great Southwest, represented in soil and climate by West Tennessee, and illy adapted to the economical production of wheat, but noted for its yield of maize, the introduction of a new and easily cultivated cereal from abroad, or the domestication of one indigenous to this country, would prove an especial boon. Although the latter, the preferable plan is seldom pursued, while the importation by government of foreign seeds and plants is annually repeated at great expense; yet at home, almost within the maize-growing region itself, may be found a plant eminently worthy of general experimental cultivation. Nature appears to have furnished us in the Zizania aquatica, with an indigenous grain susceptible of easy culture, and even in its wild state possessed of highly nutritive properties. *Pursh*, in his "Flora Americæ, septen trionalis," London, 1814, describes the plant as perennial, and as common in all shallow waters from Florida to Canada. *Gray*, in his "Botany of the Northern U S," groups the *Zizania* with the common rice, although regarding them as distinct genera, and states that the plant is common on the swampy borders of streams especially westward; growing from three to nine feet high, with leaves from two to three feet long; grain half an inch long, and gathered largely for food by the Northwestern Indians. Darby, the author of the "Botany of the Southern States," published in Macon, Ga., represents the Indian rice as growing there in inundated places, and attaining a hight of from six to twelve feet. It has therefore a geographical range through many degrees of latitude, and is probably as capable of withstanding extremes of climate as its sister cereal, the Indian corn. The latter when discovered to be the principal grain eaten by the Aborigines, was immediately adopted by the early colonists as an article of food.

The Indian Rice is as highly esteemed by the Indians of the northwest, as was corn in the first settlement of the country, by the Indians of the northeast, yet with less forecast than our ancestors we overlook its value and neglect experiments upon its cultivation. Its remarkable abundance in the swampy lakes of Minnesota, is attested by many travellers, who also assure us that the grain is collected in September, by by the squaws, who pushing their canoes among the thick growth, bend the heads of rice over the sides of their rude vessels, beat out the grain with their paddles, and after drying it in the sun husk and winnow it. *Loudon*, quoting from *Pinkerton*, remarks that "productive as is this excellent plant, and habituated to situations which refuse all cultivation, it is surprising that the European settlers in the more northern parts of America, have as yet taken no pains to cultivate and improve a vegetable production, which seems intended by nature to become at some future period the bread-corn of the north.

In 1855, a missionary party on their journey from Toronto, to the stations on the Red River of the north, found in the Indian rice an agreeable dish. They purchased it, clean and husked, of the Indians at a dollar a bushel, and made it a principal article of food.

In his herborizations round Philadelphia, the writer has collected the plant, which is not uncommon. Its appearance more nearly resembles the oat than the common rice, and in habit simulates the *reed* so common along our tidal water courses, growing in the water where other crops cannot be cultivated, and not on recently drained or unusually inundated land.

Plantations of Indian rice, therefore, promise to be free from the curse of southern rice-fields—malaria.

From the apprehension that the seeds in order to retain their vitality should be transported in damp earth, mud or water, many have probably been deterred from attempting the cultivation. Experiments, however, show this apprehension to be wholly unfounded, as seeds transmitted in paper to Great Britain, have germinated and produced flowers and fruit in a green-house-aquarium during the second year after their arrival. The dryness of the seed retarded their development, but did not destroy their vitality; hence we infer, that they should be preserved fresh and planted in earth under the water as early as possible after their receipt.

The distribution during the approaching season of fresh Indian rice seed by the Agricultural Department of the Patent Office, would in all probability before three years, add another and an important element to the stock of cultivated human food, and this not only without taking land now appropriated to grass or tillage, but by utilising portions now useless for any agricultural purpose. Such a distribution would manifest a laudable desire on the part of the office to promote experiments with our own wild products, in order to their domestication. The farmer who now moans over the possession of shallow watery wastes, would gladly respond to any proposition to experiment with the view of ultimately making them profitable, and the miniature depths of the thousands of aquaria which—now, that the sub-aqueous world is fashionable,—grace the parlors of the rich and the lowly, would become so many seed-beds and nurseries of the Zizania. *Polytechnic College, Philadelphia, August*, 1858.

The Apple Borer.

This insect, so troublesome in many places, should be looked for early in autumn. We have never found anything better than punching them to death in their holes. The fresh sawdust-looking deposits, thrown out at the foot of the tree, are always an infallible indication that the borer is doing his work. The sooner he is destroyed the better. A flexible wire is a good tool for destruction; but a slender, half-seasoned apple shoot, answers a good purpose. The insect may be reached if five or six inches within, if he has not packed the hole too closely with his chips. As an intelligent friend quaintly remarks, "we may always know when we have killed the borer by the *squashing* at the end of the shoot." A little experience, and a moderate share of skill, are all that are required to clear a tree in a few minutes. It is always best to clear away the chips and outer bark with a knife, till the hole is distinctly found. Now is the time. Do not wait a day.

New Seedling Grape—Muscat Catawba.

Eds. Co. Gent.—It is with sincere pleasure I remit to you a drawing of a new grape destined to supersede the present favorites for wine-making and the dessert.

The gentleman to whom we are so much indebted for this national benefaction, is Mr. Frederick Von Vleck, a practical *vigneron* from the far-famed Rhine, but now a citizen of New-York city.

Mr. Von Vleck is an ardent and skillful cultivator. For a number of years much of his time has been devoted to improving the native grape by crossing with superior foreign varieties. A happy result has been realized to his labors in his seedling, which he has named the Muscat Catawba. It is the offspring of that highly renowned grape, the Muscat of Alexandria, and the Catawba. To some degree it bears a likeness to both parents, but in habit of growth and hardiness, it is closely allied to the Catawba; the fruit, however, is entirely exempt from the austerity and rank aroma of the latter sort. As an example of its hardiness, I would state that a portion of Mr. Von Vleck's vines were unprotected for the two past severe winters, and were unscathed, excepting about a foot of the extreme ends of the branches.

The fruit is of the largest size, and adheres with great tenacity to the stem; the bunch is rather larger than the Isabella; the fruit has a rose-colored skin, so transparent as to expose the interior; the pulp is melting and surcharged with a delicious juice, highly perfumed and sweet. It ripens perfectly in the open air, and has not yet shown any symptoms of disease.

Mr. Von Vleck last season made from the *Muscat Catawba* a few gallons of wine from twelve small vines Having had the pleasure of tasting it, I am qualified to state that I esteem it superior to most of the Rhenish wines imported to this country. It is of a clear light amber color, is quite heavy, rich and fruity, and possesses an exquisite perfume. It strikes me as having most of those qualities extolled by connoisseurs.

In consequence of having cut down his vines very close last autumn to obtain cuttings for propagation, there is but a small crop of fruit this year—that in the open air has already commenced coloring. The fruit which I tasted was matured under glass.

Mr. Von Vleck's success will be an inducement for other cultivators to attempt the growing of native seedlings, judiciously crossed with the esteemed foreign varieties. B. S. Ward. *Jersey City, N. J.*

[The drawing accompanying the above was too imperfect to place in the hands of the engraver. Will Mr. V. V. send us a bunch or two of this grape?]

Farm-Roller—Seed-Sower—Horse-Pitchfork.

Messrs. McCammon of Kentucky, inquire through a recent number of your paper, as to the best method of sowing timothy seed. You reply that "you have seen no method preferable to *hand sowing*." The thrifty farmers of our section scorn the practice of "hand sowing," when compared with the simple, cheap, and durable machine invented and now very largely manufactured by C. Bartholomew & Son, Etna, Tompkins Co., N. Y. The machine is by far the most useful, in consideration of its expense, of all the farming implements of our vicinity, performing the labor of farm-roller, timothy seed and clover seed sower, plaster-sower and stone-gatherer. The machine, as originally manufactured by them, was simply a farm-roller, of different sizes, but ordinarily about six feet long, composed of two cylinders instead of one, each having two strong cast-iron heads, upon which are bolted heavy, hard wood staves. The diameter of cylinder is 3ft. 1 inch, and the weight of the entire ordinary sized roller about 1400 lbs. The cost of the farm-roller alone is $40; cost, with seed-sower attached, $55; and with both seed-sower and plaster-sower, $70. The roller has also boxes attached for carrying off stones disturbed upon meadows by horse-rake, which would interfere with the mowing machine the following season. The peculiar advantages which this implement possess, are, 1st. Its graduation enables the farmer to sow any quantity he may desire per acre. 2d. He will distribute it so evenly over the ground, that no space will be unoccupied, (thus saving a quarter at least of his seed,) while it is also rolled in precisely the proper depth, instead of being dragged in too deeply. 3d. The draft and turning around are much more easy than with a single long cylinder. 4th. The farmer can sow seeds or plaster as well in windy as in still weather, while they can never be well sown by hand during more than the slightest breeze, which is a highly important advantage. 5th. They are more durable than any other implement of my acquaintance, intended for rolling. Combining these five important advantages at so small an expense, they become at once an indispensable appendage of well managed farms.

It may not be amiss at this point to state the position of Messrs. C. Bartholomew & Son as public servants. Long and favorably known throughout southern New-York and northern Pennsylvania, as manufacturers of Bartholomews' improved iron platform, and a variety of other scales,—as gentlemen of undoubted integrity, as well as mechanics of much skill and experience,—their standing as Agricultural Implement manufacturers, which department has recently been added to their business, is an enviable one, as well as an important one to our southern farmers.

Bartholomew's Horse Pitchfork originated at this establishment, and is a *wonder*. Their trade in this branch has increased in three years to as great an extent as their capacity at present allows. Its value may be appreciated when it is understood that a man, boy and horse will unload from a wagon, in five or ten minutes, and throw into the highest barn-loft, a ton of hay or unbound grain. Its cost in full is but $15, which sum will be twice saved in time of hands in pitching 100 tons of hay. x. y. z.

Gapes in Chickens.

MESSRS. LUTHER TUCKER & SON—I have just read in your Co. Gent., of the 19th inst., an article on the subject of Gapes in Chickens, signed N. D. E., in which he gives an illustration of his mode of operating with a horse hair, to remove the *gape worms*, which he says, "if the rays of light are permitted to fall upon its throat, the worms are more distinctly seen." From this remark, together with the position of his hand, the horse hair, and whatever it is he pokes it down with, (as he has not informed us) I should very much doubt whether Mr. N. D. E, ever operated on, and cured a chicken of the gapes; for in the first place holding the chicken by the neck and head with its wings and legs unconfined, it would struggle so much that it would render it next to impossible to poke his horse hair down the windpipe, and he would no doubt strangle the bird before he succeeded in getting out the gape worms, of which there are frequently from fifteen to eighteen; and, as to his seeing the gape worms before they come out of the (Bromus) or windpipe, that is impossible, unless he takes it out and slits it open, as they extend down to where it branches off in the lobes of the lungs. If Mr. N. D. E, would refer to your October No. (10) vol. 1, 1844, of the Cultivator, p. 305, he would then see a description of the gape worms, and the mode for removing them, which I have practiced for the last thirteen years, on chickens, turkeys and goslings, and never lost one; and this last summer every one of my chickens have had the gapes, and I have operated on and cured them all. This reminds me that this spring I wrote to you and advised you to republish that article, as you said you had no extra numbers of the October Cultivator of 1844, as I have frequently met with farmers who did not understand how to cure the gapes in fowls. My mode of operating is to strip the feathers off of a small quill or feather, within half an inch of the end, and with a scissors trim it from the small end in a spear shape thus:

regulating the size of the quill by the size of the chicken to be operated on, being careful not to have it too large; and I generally have a half-a-dozen feathers of different sizes on hand, and when one gets wet in operating, I take a dry one. I then take the tip end of the wings, hold them along side of the bird's legs, and wind a string around to prevent the bird's struggling; then hold the bird's legs between my knees, hold the head of the bird between the thumb and fore finger, have a person to hold the tongue of the chicken with the thumb and fore finger of the right hand, thumb up, and, having my trimmed quill in my right hand, when the bird opens its windpipe to breathe, I pass it down till it stops, which is where it branches off in the lungs, (below which I've never detected the gape worms;) I then twist it around as I withdraw it, and generally bring up or loosen the worms, and the chicken coughs them up. If I think they have not all been ejected, I repeat the operation two or three times. The ends of the trunks of the gape worms are similar to a leach armed with a three-cornered spear, which leaves a wound on the wind-pipe, which frequently bleeds considerably after the worm is removed. The feather ought to be roughed up between the fingers before introducing it, and wiped perfectly dry before repeating the operation with the same feather. The operation should be performed slowly and carefully, and there will be no danger of strangling the bird. CHARLES F. MORTON. *Mortonville, N. Y.*

Gathering the Hop Crop.

The usual time for picking hops in this latitude, is the three first weeks in September, generally commencing the first week. They should always be gathered before any frost, as that injures them very much.

In the first place you want some boxes, six feet long, twenty inches deep, and the same in width. They should be made of half-inch boards, and made as light as possible and yet of the requisite strength. Then take two strips of inch boards, ten feet long and five inches wide, and put one on each side near the top of the box, and let them run out two feet beyond the end to serve as handles to carry it by. Then get some hop-sacking (a kind of cloth made for sacking hops,) and make two or three large bags that will hold from fifteen to twenty bushels of hops, to carry them to the drying house in; and then make for each box a common saw-horse, about three feet high, and you are all ready to commence picking.

You want four pickers and one tender to each box; and then place your box between two rows, and the saw-horse close by, and lay a couple of short boards across the middle of the box to lay the vines on after they are cut from the poles. It is the tender's business to cut the vines about one foot from the ground, pull the poles, and lay them across the saw-horse, and cut the vines into small pieces, and lay them on the boards across the box, so that the pickers can get them without stepping after them.

The pickers should be very careful and not get in leaves or stems, as they injure the sale of the hops, more or less according to the quantity left in. As soon as the box is filled, put them into one of the large bags and carry them to the kiln to be dried, which should be done as soon as possible.

The picking is for the most part done by women and boys, but it requires a pretty stout man for tender, as it is rather heavy work to pull the poles when well loaded. All this may seem like a great expenditure to a new beginner, but he must bear in mind that all these things, if properly cared for, will be just as good for several years to come as new ones, and a good set of poles will last from six to ten years, if taken care of as they should be. Some draw them together, and pile them up and cover them over, but I think it better to stack them up in the field, as it saves a great amount of labor, and they will keep about as well. Take two poles and tie them together near the top with a hop vine; then stand them up, spreading the bottoms so as to have them stand bracing, and then stand the rest around them in a round pile, putting in from fifty to one hundred. More anon. HOP GROWER.

How to Dry Sweet Corn.

MESSRS. EDS—In the Country Gentleman of Aug. 12th I observed an inquiry for a recipe for drying sweet corn. I send you a recipe which can be relied on. Boil the corn, then cut it from the cob and spread it on a cloth in a room where the air will circulate freely, taking care not to let the sun shine on it. J.

Wheat and Chess.

This subject having been recently alluded to in the Country Gentleman, and the fact stated that at various times during the past twenty years, premiums of fifty and a hundred dollars have been offered by different persons for a specimen in a state of transition, (for among the billions constantly changing it was supposed many might be found in the act,) or with part chess and part wheat growing from the same stalk or root. Several such specimens were claimed to have been found, but they were either spurious or artificially made, or were not actually presented for the premium. If there are now any genuine specimens of the kind in existence, and the premiums heretofore offered are not large enough to bring them to hand, one of the editors of this paper is willing to increase the reward to any desired amount, sufficient to bring such a specimen before the anxious and incredulous public.

Our principal object, however, at the present time in alluding to this subject, is to report the progress made by the committee appointed last year by the New-York State Agricultural Society, to *turn wheat to chess*,—provided they could do it. Our readers may perhaps remember that we stated about a year since, that Benjamin Hodge of Buffalo, had previously offered a prize of one hundred dollars to any one who would turn wheat to chess. A worthy farmer near Rochester claimed the prize—one of the conditions of the payment of which was its award by a committee appointed by the New-York State Agricultural Society. Such a committee was appointed, and met at Rochester in company with the claimant for the premium, with a mass of wheat and chess growing mixed together, and conveyed in a large tub. Clean wheat had been planted, and chess was found. As it was not certain that the seed of the chess might not have been accidentally scattered by fowls or in various other ways, the committee could not make the award, unless the chess was found actually growing from the half-decayed grains of wheat. *This was found to be the case;* but on further examination by microscopes, the roots of the chess were discovered, not to proceed from the end of the grain from which the sprout always issues, but in every instance from some other part at random; and a further examination showed that there was no adhesion between the grain and the root, but that it merely passed through the shell of the grain, or came in accidental contact. So far, then, this experiment proved nothing.

The applicant was not willing to relinquish the investigation here, confident as he was of complete success, if he only had a fair trial. He desired the continuance of the committee, for further experiment, expressing at the same time his entire confidence in their integrity and fairness. He provided them with large square tin boxes, in which to effect the transmutation under his special direction. They all performed the experiment, with all the care required. The earth before placing in the box, was boiled in a cauldron with water for an hour or two, to destroy all seeds it might accidentally contain. The wheat was then planted, a part in heads and a part in grains, arranged in a regular figure so as to detect any accidental seed that might afterwards fall among it. It was planted shallow, was subjected to flooding, freezing, and thawing, rubbing with the foot, and various other kinds of hard treatment, tending to make it deteriorate to chess. *But no chess came.* The wheat would not change in the hands of either of these three committee-men. In one box, the wheat was entirely destroyed by the freezing and thawing of winter, added to the severe manipulation it had received. In another, it grew, but seemed obstinately determined to retain its own identity; it would not change. This is the present state of the subject,—and it will probably remain so.

In the mean time, we wish to get hold of any half-transmuted specimens, or with wheat and chess from one root, and as we before said, are willing to offer such a prize as shall certainly bring it, if such a specimen exists. Applicants will please say how high a sum they want.

Draining Prevents "Heaving Out."

Among other evils incident to undrained soils, is the liability to heave or freeze out the crops sown thereon, so that it is difficult, if not impossible, to grow winter grain or clover profitably, though the soil otherwise is well suited to their production. A case coming under our observation the past winter, will well illustrate the subject. A field of five acres, seeded to clover two years ago upon rye, owing in part to the presence of snow upon the ground the greater part of the first winter and spring, escaped with slight injury from this cause, and gave a very good growth of clover. But the past winter, the weather being of a different character, the grass on about three acres of the field was entirely destroyed, every root of clover, being pulled up or thrown out, laid loose upon the surface of the ground the present spring. This was an example of "heaving out" of unmistakable character.

The cause and process of freezing out has been explained as follows: "The soil is pulverised only to the depth of the plow, some six or eight inches. Below this is a stratum of clay [or hard-pan] nearly impervious to water. The autumn rains [and melting snows in spring] saturate the surface soil, which absorbs water like a sponge. The ground is suddenly frozen; the water contained in it crystalizes into ice, and the soil is thrown up into spicules or honey-combs, and the poor clover roots or wheat plants are drawn from their beds, and, by a few repetitions of the process, left dead upon the field in spring."

The evil lies in *a saturated soil.* It matters little whether the surface be clay or sandy—it did not in the case above mentioned—if the subsoil is of an impervious character. We were much surprised to find in a slight depression, some three or four rods across, where the surface soil was a light sand, that the clover was as badly winter-killed as on the clayey part of the field. And the clayey part, it is well to mention, had good surface-drainage from the descent or slope of the ground—at least an inch in a foot. This sandy corner was underlaid by an impervious hard-pan, holding water equally as well as the clay; and we believe this will generally be found to be the case in all loams which suffer from heaving or freezing out.

We have shown in a previous article, that "draining deepens the soil," and hence it is *the* remedy for freezing out in all cases. Water no longer saturates the surface soil in such quantity as to form honey-comb ice every time it freezes; the plants are no long-

er confined to short roots, but have a better hold upon the soil, and it has been found that no loss whatever results from this cause, however unfavorable the season, on a thoroughly drained soil.

A little testimony on this point may not be out of place here. MAXWELL BROTHERS of Geneva, tell us, in the Transactions of the N. Y. State Ag. Society for 1855, about draining a clay field which previously could not be worked for spring crops in season for sowing, and *heaved so badly as to ruin winter crops*, which draining has rendered as mellow and productive as can be desired, so that they can cultivate immediately after heavy rains, and grow wheat and clover without loss from frost. JOHN JOHNSTON of Seneca county, has given pointed evidence on the subject, both in our own columns and in other publications. By draining he has so improved his clayey farm that no loss is suffered from this cause, though formerly it was a source of great injury to the crops in the low lands, entirely ruining wheat, and destroying it in many places upon the higher parts of the farm. Many like cases of the beneficial results of draining in this respect could be given were it needful, to our readers.

Items in Grape Culture—Pruning Old Vines—Grafting Grapes.

The rule given in books and papers concerning the pruning of the grape, almost invariably refer to the management of young plants just taken from the nursery. But there are thousands of vines in all parts of the country which were neglected while in that forming period. What shall be done with them? Let us look at one as a specimen. Here are three or four large, stiff trunks, running up six or eight feet, entirely destitute of branches, but having a clump of matted shoots on the top of the frame, which bear a little fruit. By the side of these trunks, and shooting out at the roots, are half a dozen suckers, young and vigorous. Now, as it would weaken the vine to cut it all down at once, (in order to get new shoots for training according to rule,) would it not be well to saw off the old trunks close to the ground, cut out all the suckers except three or four of the strongest, and shorten back even those to four or five feet from the ground? These canes may then be tied to the trellis, three or four feet apart. Undoubtedly the vine so treated would show some signs of improvement the first year, and still more the second year, if not neglected. To ensure the productiveness of the canes on the lower part of the vine, it would be advisable to tie the canes in spring horizontally to the trellis bars until the lower buds were well pushed: then they might be tied up again more erect. Will experienced fruit-growers suggest any improvements on this method?

As it is sometimes as useful to record failures as successes, allow me to give an account of my ill success in grafting old grape-vines. Last spring, wishing to ingraft the Rebecca and Delaware grapes upon stocks of the Catawba and the large blue Fox grape, I consulted the fruit books on the subject, and chose just the right time for the operation, viz., "as soon as the leaves of the old vine or stock are fully expanded, and all danger of bleeding is past"—(Downing.) The stocks were cut off below the surface, and the scions inserted in the usual cleft manner, grafting-wax put on, and the earth drawn carefully around the scions, leaving only one bud above the ground. Weeks and months passed, but the scions failed to start. Suckers from the stocks pushed up vigorously, but were constantly pulled off. At length, however, the bud of one of the grafts began to look green, to swell, to burst open, to grow! And it continues to grow up to the present time. But all the others are black and dry. The only way I can account for the failure and the success, is this: The lost scions were not shaded from the sun, and consequently became dry before a vital connection was formed between them and the stocks. The scion which grew was accidentally shaded by a neighboring vine. Is this a sufficient explanation? If not, who will give one? A. B. G.

Milch Cows—The Value of Blood.

At one of the fairs of the Bristol (Mass.) Ag. Society, the committee on milch cows found fourteen animals exhibited by several persons, presenting a uniformity in points of excellence and general appearance, which would be extraordinary were it not known to be the result of attention and adherence to *blood*. The character of this family of stock—bred by Mr. Rodman, in New Bedford—has been established and maintained for many years. These cows present a practical lesson, which we have thought worth recalling for our readers.

Some twenty five years ago Mr. Rodman owned a valuable Alderney cow, which he bred to an imported Short-Horn bull of an excellent milking family. The produce of this cross was a cow, which lived to a great age, and was invaluable for the dairy. From herself and first calf, by a Short-Horn bull, descended all the animals spoken of above—all got by Ayrshire bulls of acknowledged excellence. Neither of the cows ever produced an indifferent milker, and their dairy qualities have been transmitted to their descendants even distantly removed—all are noted for a large yield of rich milk. "Can the same," ask the committee from whose report we condense the above, "be said of any yard whose owners have depended upon chance cows and drove bulls?"

Tar a Preventive of Hog Cholera.

MESSRS. EDITORS—The hog cholera has made sad havoc among our hogs this and the preceding year—some farmers losing nearly their entire stock. No cure has yet been found, I believe, that will cure after hogs have got it once, or at least we do not know anything that will.

I will give you what I consider a preventive, and prevention is better than cure. Ten or twelve died for me during last summer and fall, without anything of the various remedies recommended having the least effect on them. Through winter only one died for me. This summer more hogs have died by far than last year in our neighborhood, while only one has died for me, which commenced to vomit in the morning, and before noon was dead. After that I commenced feeding corn in the ear, well tarred, to my hogs, once a day, and have done so ever since, except I give them only once in two or three days at present. Not one has had any known symptoms of cholera since, while my next neighbors have lost more than the half of their entire stock.

Is tar a preventive, or is it only luck that my hogs have not had the cholera since I commenced feeding tar. HENRY KELLER.

The Third Springfield Horse Show.

In pursuance of the published notices there assembled at Springfield last week, in competition for prizes offered under the auspices of the Hampden Ag. Society, a number of horses considerably larger than either in 1857 or 1853, the two occasions on which that city has before witnessed similar exhibitions. The former of these "was the first Horse Show, pure and proper," says the Springfield *Republican*, "ever held in this country."

"It did not originate among jockeys. It can hardly be said to have originated among horse men. The fact was recognized that a great material interest of this country was in the hands of a class not in the best repute, and it was determined to divorce the horse from a set of associations which had identified the development of some of his finest qualities with the race course, the circus, and their accompanying vices."

Accordingly an example was then set which has since elicited numerous imitations, but none in which there has been, perhaps, so high a standard set up, and none that has attracted so wide attention. After the exhibition of 1853 was concluded, of which our own columns contain quite a full account, the surplus receipts were applied to the purchase of a fine Park for the use of the Hampden Society, and it was with the view of completing this purchase that arrangements were made both last year, when the grounds were inaugurated, and at this year's Show, by some of the most substantial and prominent citizens of the place, to render the two exhibitions creditable, not only to themselves and their city, but to New-England and the whole country. A public object of so much interest to the place, drew forth support that might not otherwise have been given; the grounds contain sixty acres of beautiful land, nearly on a perfect level, upon the bank of the Connecticut—already dyked off from the territory it has heretofore claimed as its own during every high freshet, and shaded by the numerous trees planted to protect and strengthen the dykes, and to add to the attractiveness of the place. This embankment furnishes also a delightful promenade, and a fine *coup d'œil* of the whole field stretching out in a parallelogram, with a mile track carried around near its outer bounds, and, within this, one of half the length—both equally well graded and completed—while the space, before you reach the outer track, is this year occupied by sundry strolling show-men, whose lively voices hailing the crowds about them, and tents with various colors flying in the air, and the large and well frequented eating tent among them, give this side of the field an air of great activity.

At the further end, beyond the course, are the well built and ornamental stables, including one capacious structure containing barn, carriage-house and stables together, and a second longer and intended for the last purpose only,—while the horses, led, in harness and under saddle, are grouped about this end of the grounds waiting their turn upon the track; and those in motion around it, and the throngs of spectators that line or look down from their seats upon it, and the crowded judges' stand and excellent band near by, combine to make the whole a scene which is seldom on so large a scale and in such order and advantage presented at once to the eye. The officers of the Society this year are: President George Bliss, Chief Marshal George Dwight, Secretary J. N. Bagg, and Treasurer Henry Alexander, Jr., who with G. M. Attwater, J. S. Whitney, Horace Kibbe and John L. King, constitute the managers.

The entries this year included 4 thorough-bred stallions, among them Mr. Henry Sanders' imported Barb, "Musa," now nine years old, 15 hands high, and purchased in Morocco, and Mr. J. B. Monot's "Logan," bred in this state; and one thorough-bred mare originally from Kentucky. Class 3d, stallions for general use, eight years and over, numbered thirteen—among them O S. Roe & Co.'s "Ethan Allen," Black Hawk, raised in this state; A. Carpenter's "Richelieu," a Vermont Messenger horse; Lambert Maynard's "Trotting Childers," Black Hawk; Stephen Hayes' "Natick Cobbler," Abdallah and Messenger; Warren & Co.'s "Hiram Drew," raised in Maine, English Messenger and Morgan; "Rattler," owned in St. Lawrence County; "Jupiter," a horse from Long-Island, and and several other fine animals. We were present during the trials of speed in this class; that between Ethan Allen and Hiram Drew, was of course watched with the greatest interest—the former barely winning in 2:41, on the half mile track, which being somewhat soft, a slight allowance should be made on this account. But neither of the horses behaved as well as we expected, breaking up frequently; a trot nearly equal in time, and far better as regards this respect was made by Jupiter and Richelieu, the former winning in beautiful style in 2:41, never breaking during his whole time on the course. We see that in a subsequent trial he did not come off quite as well, but his action on Wednesday was certainly most creditable.

Of stallions over five and under eight, there were 32 entries, and we had the opportunity of seeing but few of the animals themselves, while the list would be too long for very critical notice. But we were assured that this was one of the best displays in the whole, and we should not omit to mention "Prince Albert," owned by Mr. J. P. Kimball, of Saugerties, a horse of whose stock we have heard very favorable accounts. There were 46 entries in the class of stallions over three and under five, and here as well as above, among so many of course it is very difficult to particularize The judges found their task not an easy one. They selected a limited number of the best for further examination to take place after we had left; and the result of th ir deliberations will appear on the Prize List which we have not yet seen.

There were shown in this division several very promising horses from this State—among them "Vergennes Black Hawk," owned by A. W. Swift of Westchester, and "Ed. Holly," bred on Long Island. Fifteen stallions in the class of one year and under three, complete this department of the Show. Few among them attracted more attention than Mr. Wynkoop's "Empire State" from Catskill, of which our columns have already contained several notices—his owner matched him in this city about a year ago, against a Massachusetts colt, since which time he has grown and improved in full proportion to the promise he then gave.

In the half-dozen classes embracing females and colts, the entries number nearly fifty, and this part of the exhibition, though not so likely to attract attention as some others, was probably fully up to the mark in comparison with the remainder. In Matched Horses, which follows next on the list, we saw less than we anticipated, but there were some very showy coach-teams—including Col. Zadoc Pratt's span of Messenger grays, a fine pair of sorrels, the ownership of which we have forgotten, and we do not know that we are doing right in mentioning these, when several others among the 25 have claims to notice nearly as strong.

But to go through the whole list as we have begun, is more than our space will allow. We deferred the preparation of this notice until the last moment, in the hope to give the chief awards this week, but are forced to go to press before they reach us There was scarcely any feature in the whole exhibition that attracted more notice than a four-in-hand team,

shown by LEWIS B. BROWN, Esq, of New-York. Their respective ages were, 30, 29, 22 and 19 years, making an aggregate of a hundred. Mr. B.'s object was to show that good horses deserve to be well taken care of in their old age, and will well reward such attention—instead of being turned over to omnibuses, clam-carts, or the canal. His horses were not only sleek and in good order, but what will the reader say when we add that they made their mile in 3:20 before not a very light load, and with a track-ful of other teams frequently in the way! They not only show this speed, trotting off like young horses, but their endurance is still remarkable; and the lesson Mr. B. would teach, of kindness and humanity to valuable horses, even when blindness and other defects begin to show themselves, could not be more strongly enforced than by this practical example. One of the team lost its sight some time ago, but it is still perfectly safe to drive or ride him, and he by no means lags behind his mates. One of them, too, Mr. B. showed alone as a saddle horse, and he acquitted himself here as unexpectedly well as before the wagon. Among other saddle horses, Col. Sam. Colt's "Ivanhoe," a Black Hawk raised in Kentucky, attracted every eye.

The classes of Roadsters, geldings or mares, and of gentlemen's driving horses, numbered nearly 70, and were a very good show; Farm and Draft horses were not out in very large numbers—not quite equal in this respect, we think, to the ponies, which of course were looked upon with the usual degree of delight by the younger portion of the spectators.

If we have not said enough to show that the cavalcade of all the horses on opening the Exhibition must have been a fine sight, and that the whole taken together was well worthy of its projectors and of the fame New-England has won as a horse-raising country, we have not done justice either to the facts of the case, or to our own enjoyment of the occasion. Conducted with more than the usual decorum even of ordinary agricultural shows, there was nothing, at least during our stay, to mar the success or diminish the pleasure of the Exhibition, and although on Thursday Hampden Park was not sufficiently favored by the weather-gods to escape the general storm, despatches since that day would indicate an attendance large enough to further materially the enterprising views of the Hampden Society in the purchase and improvement of such grounds for the benefit and gratification of themselves and their children after them.

The Session of the Am. Pomological Society

This body held its Seventh Session at New-York last week, Hon. M. P. WILDER, in the chair, and opening the proceedings by the customary address. After a felicitous introduction, Mr. W. discussed at some length the question of Pear growing, and concluded with asking the Society's acceptance of his resignation as President. After a resolution of thanks, the following officers were elected for the two years ensuing:—

President—Hon. M. P. WILDER, of Mass.
Vice-Presidents—One from each State in the Union.
Secretary—Thomas W. Field, Brooklyn, N. Y.
Treasurer—Thomas P. James, Philadelphia, Pa.
Executive Committee—The President and Vice-Presidents ex-officio; W. D. Brinckle, M. D., Philadelphia, Pa; T. W. Field, Brooklyn, N. Y.; M. B. Bateham, Columbus, Ohio; L. E. Berckmans, Plainfield, N. J.; F. K. Phœnix, Bloomington, Ill.

A paper was read by the Secretary from Mr. L. E. BERCKMANS of New-Jersey, encouraging pomologists and fruit growers to renewed activity, and another by himself, upon the adaptation of varieties of pears to different localities; a third was read by President Wilder from J. J. THOMAS, showing how far the roots of trees extended beneath the surface, and the distances at which fertilizers can be effectively applied. Mr. WALKER of Roxbury, advocated the publication by the Society of a Catalogue of all the fruits which have been cultivated in this country, giving lists of the best sorts adapted for each state, and full outlines and descriptions.

We spent some hours Wednesday and Thursday in listening to the discussions, and in examining the display of Fruits. The former we hope to speak of hereafter more at length than time now permits, and previous to a brief notice of the latter, it may be mentioned that a final adjournment took place Thursday evening, the next biennial meeting being fixed for Philadelphia in 1860.

Our columns have already recorded the success in fruit growing of Messrs. Westbrook & Mendenhall, of Greensboro, N. C. They showed a remarkably fine lot of apples, including 77 varieties—also 13 of pears. There were several other samples of fruit shown from the south. Among prominent exhibitors of Pears were President Wilder, and Hovey & Co., each collection numbering about one hundred and fifty sorts; Ellwanger and Barry with about two hundred; William Reid, over one hundred; Thorp, Smith & Hanchet, 124; W. L. Ferris, 55; W. P. Townsend, of Lockport, 38, and various smaller lots, including plates of fine fruit from Dr. J. F. Boynton of Syracuse, W. H. Mitchell, Harlem; E. W. Sylvester, Lyons; James J. Mapes, Newark; John G. Bergen, Brooklyn; Jas. M. Paul, North Adams, Mass.; and S. P. Carpenter, New Rochelle. On the whole we consider the show of Pears the finest this Society has ever brought together. Other fruits were not exhibited in proportionate numbers. Grapes were probably next to pears in extent—we noticed good samples of different varieties shown by S. P. Carpenter, Charles Downing, Dr. E. Miles, Dr. C. W. Grant, Wm. Brocksbank, H. W. Terry, P. Steel & Son, Rev. C. A. Goodrich, T. C. Austin, E. E. Clark, D. S. Dewey, and others from Connecticut, a State which seems now-a-day's to be paying great attention to the vine. A branch of the Hartford Prolific, wonderfully crowded with clusters, was shown by E. A. Whitney of that city. Several collections of apples, plums, melons, &c., made up a variety.

Sheep at the West.

Answer to J. B. Jones, Co. Gent., Sept. 9.

1st. From 5 to 8 sheep can be pastured on acre of *good* clover and timothy.

2d. Eight sheep per ton of hay without grain—12 to the ton if fed one gill of corn per day.

3d. A cross of Spanish and French Merino sheep is the best for *wool* here. Some like pure Spanish best, and a very few like pure French Merinos best. For mutton, the South Downs are probably the best.

4th. If every ewe is thrown out as soon as served *once*, one buck is enough for one hundred ewes—otherwise three.

5th. With hay racks under the same roof—(and no good shepherd would feed hay out of doors)—800 feet (40 by 20 ft.) is enough for 100 sheep, except breeding ewes; they should have more.

Sheep also want plenty of pure water, and must not be allowed to run all over the farm during the winter. It also increases the weight of the fleece to feed them oil-meal along with their corn. Old and young should have separate yards, as the lambs will require more care the first winter than the older ones. D. A. A. NICHOLS.

Wetherell's Horse Hoe.

This is a new machine for hoeing corn, potatoes, &c., and deserves emphatically the name of *Horse-hoe*. It is not a modification of the cultivator, but is entirely new in its principle. We have no doubt, from a limited trial with it, that it will prove an implement of great value, and if judiciously and promptly used, nearly or entirely supersede hand-hoeing. It is especially adapted to drill culture.

It is like a small plow with a double mouldboard, with a large wheel running before it. A cog-wheel gives a rapid revolving motion to two set of fingers or shovels, situated just behind the mouldboard, and which scatter the newly plowed earth outwards at right angles to the line of draught, pulverizing it finely, throwing it among the plants, and covering up all small weeds. The quantity of earth thus scattered may be accurately regulated. If, for example, the young weeds have just come up, an inch of pulverized earth may be thrown over them; if they are several inches high, a large quantity of earth will be required to smother them. The work is done more neatly and evenly than by any hand-hoe, leaving the surface as smooth as an onion-bed. The broad flat surface is much better than the narrow hilling usually made with the plow and hoe. The fingers or shovels revolve about two and a half times faster than the motion of the horse, so that when the horse travels three miles an hour (ordinary walking) these fingers strike the earth at a velocity of about ten feet per second,—sufficient to affect a fine pulverization of clods. If there are many small stones, the motion must be as slow as practicable; and if there be large stones, the hinder part of the machine must be lifted over them, which is easily done, as the weight is nearly balanced on the large or forward wheel.

It may be used in all cases for covering weeds among crops, when these weeds are smaller or slenderer than the crop itself,—the quantity of scattered earth being so regulated as to cover the weeds, while the crop will resist it; but it is obvious that the work should be always done when the weeds are smallest, and repeating the operation as frequently as they re-appear.

We think this machine destined to increase the corn and potato crop by the more cheap and efficient hoeing which it will effect; and greatly to lessen the labor, if nothing unforeseen should be found to diminish its value.

Our experiments, owing to the lateness of the season when this implement was received, have been mostly among young fruit trees in the nursery. Another season, we hope to give our readers a fuller and more accurate report of its doings among corn and potatoes.

The patentee is Lorin Wetherell, of Worcester, Mass., who will impart any desired information.

Cleaning Seed Wheat.

John Johnston of Geneva, one of the most thorough and successful farmers in this country, as all our readers know, says that he quit raising chess *twenty-eight* years ago—by never sowing it. He has not raised a bushel of it in all that long period on his extensive wheat farm. Thirty-seven years ago he obtained eight bushels of chess in every hundred of wheat. His mode of cleaning seed is the same in substance that we have practiced thirty years ago, but will bear repetition, and we therefore give it as recently described by him:

My plan is to take out the fanning-mill riddles, some call them screens; I call the lower one only a screen—it takes out mustard seed and cockle *in part*. After the riddles are out, take off the shaking rod, or at least the one nearest the wings or fans; then let one man turn the wings or fans by the crank or handle, as usual; let another pour the wheat into the hopper from a basket or any other vessel—a tin-pail answers very well—let him pour the wheat in regularly and not very fast, if much chess. Let the man turning keep up a steady wind; he need not turn very fast. Have a boy, or a girl, or a man, or a woman, if you choose, to take back the clean wheat as it comes down from the mill, and I will guarantee that every chess seed will be blown out. The man pouring in the wheat ought to be the *boss*, to make sure that the man turning does not slack up too much, or that he don't stop turning until the wheat and chess are all out of the hopper, else it may fall down amongst the clean wheat. If the wheat is 60 lbs. to the bushel or over, very little, if any, will be blown out with the chess. As considerable will lay on the cockle and mustard screen, when that is going to be put down it is safest to scrape back the upper part with the hand, because if there is chess anywhere amongst the wheat, it will be there. Now if this is done precisely as I direct, and if the wheat is not made entirely free of chess, unless three chess seeds should be sticking together, which is sometimes the case with the top seeds on the main stalk, in that case there may be such left in the wheat, still a little more wind will blow them out. If any man will try it and cannot do it, send for me, and if I cannot do it to perfection I won't ask them to pay my traveling expenses.

We have met with many farmers who asserted that they sowed perfectly clean seed, and yet had an abundance of chess—but on closely examining such seed, spreading it out thinly, we could always find plenty of the seeds of chess; sometimes enough to make ten thousand grains in a bushel, and yet pass entirely unnoticed by a casual observer. Travelling once with a friend who "believed in chess," we offered to prove to him that all seed claimed as clean, was foul, and proposed to examine the seed we should find at the residence of a good farmer we were about to call on. The wheat was accordingly called for and closely examined—handful after handful, but no chess could be found! "What," said we at last in despair, do you never raise any chess here? I do not find any." "No!" was the emphatic answer, "no chess grows on this farm! We never sow any—we have cleared the farm of such foul stuff long ago—and we find it never grows unless it is sown."

Bloody Murrain.

At night, to all appearance, well; and if a cow, the usual quantity of milk; the next morning, ears hanging down, eyes very unnatural, a little bloated, with a little groan or grunt at every breath; the urine very bloody and putrid; dead before noon

Now for the examination: In skinning, the meat as free from blood as the best bled bullock for beef; but on opening, you find all the blood in the trunk of the body in a very putrid state. The one that can purify that blood, and throw it back into circulation, *can* cure that dreaded disease, the Bloody Murrain. Judson Wadsworth. *West Winsted, Conn.*

Experiment in Draining.

Every judicious experiment in draining, unlike many other experiments, must *always* result in success. It may therefore seem unnecessary to record the results; but so decisive and striking do they generally prove, and at the same time they are so little appreciated by those who have never practiced thorough draining, that we are always glad to record these results for the encouragement of beginners.

The Editor of the New-England Farmer gives in a late number the details of a recent experiment. Stone drains two feet deep were first employed some years ago, and their immediate effect was to increase the product of the low, wet land through which they were cut, from one ton of poor coarse hay per acre to "*three tons of good English hay per acre.*" But the draining was not deep enough; the ditches gradually became choked, and rushes and coarse grass resumed their growth.

The land was then thoroughly drained by cutting four feet deep, and laying in pipe tile. Previous to this operation, attempts were made to till it; it could not be plowed, however, till about the close of the spring months, and even then was so wet that the furrows were left in compact masses, which were afterwards broken to pieces with great labor by the hoe. The last spring (the draining having been completed,) it could have been easily plowed "at any time after the 10th of April; and, during the wet month of May which followed, and at any time since, notwithstanding the constant succession of rains, the soil has been so light and porous as to fall to pieces whenever it has been worked. It is now covered with the heaviest crops that have ever stood upon it."

Timothy—Early and Late Autumn Seeding.—II.

In a recent notice of the different seasons of sowing timothy and other grass seeds, we promised to recur to the consideration of autumn seeding, in some respects, as a more favorable time than spring or summer for that purpose.

3. Early fall seeding is frequently practiced, and in favorable seasons with eminent success. As instances, we may refer to the crop of timothy seed, which took the first premium of the N. Y. State Ag. Society, grown by Mr. HAYWARD, near Rochester. It was seeded on spring wheat, at the time of sowing that grain, but failed entirely. After harvest the ground was harrowed, and eight quarts of seed sown; in the spring it looked poorly, but came on rapidly, becoming a wonder to all who saw it. One acre, saved for seed, produced nine and one-sixth bushels. Another case is that of Mr. HOLMES, of Greenwich, N. Y., related in the Transactions for 1855, who sowed one half of a lot with oats and grass seed in the spring, on the other half sowed oats alone, and after they were harvested about the 1st of September, turned it over shallow and sowed sixteen quarts of timothy seed per acre, harrowing it in lightly. It gave more fall feed than the spring seeding, was much more free from weeds, and gave three dollars worth more of hay, the first season. It was all clear timothy and much more valuable for seed on that account, a portion of it being reserved for that purpose.

If the season is favorable and the land in good order, early fall seeding may succeed as well as can be desired, but in some trials of it—sowing on oat stubble after harrowing the same—the fall proving very dry—our experiment was a comparative failure. The grass which came up in autumn, did not get sufficient growth to withstand the winter; and this is the most potent cause of loss in early autumn seeding. The roots get but a slight hold upon the earth, and a few freezings and thawings and they lose it entirely.

4. Late autumn seeding has not been practiced to any considerable extent to our knowledge. Our attention was first called to it in the case above noted, when from the drought being continued into winter, our fall sown grass seed failed to vegetate in autumn, but came on very fairly the next season, starting with the spring and getting a growth sufficient to enable it to resist the drought of summer. The grass was thin, however—came in too thinly to produce as large or clean a crop as might otherwise have been expected.

A correspondent of the *N. E. Farmer*, who has made a variety of experiments in seeding to timothy and red-top, has been most successful in late fall seeding, sowing as late as the 20th of November, or later, if winter does not then set in. He has cut a ton and a half of hay per acre, in a favorable year for grass the first season, and over three tons the two years following. He gives plenty of seed, sixteen quarts of timothy and a bushel of red-top, and fits the ground in first rate order.

The importance of proper preparation and manuring for sowing grass seed cannot be too strongly insisted upon. Labor applied here is as certain to pay—and pay largely as upon any other crop, and we should experience far less failures in seeding to grass, did we give the matter the attention it deserves.

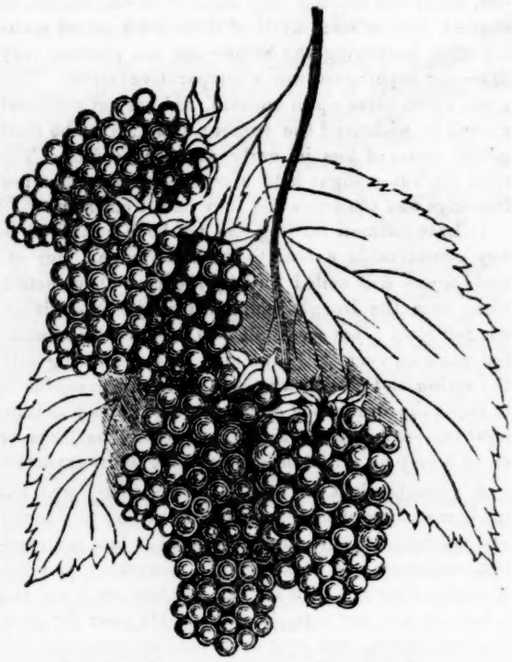
Mammoth Red Clover.

MESSRS. EDS.—In the Co. Gent. of 12th of Aug., Mr. DWIRE of Kentucky, inquires respecting "Mammoth Red Clover," and where it can be obtained. I will just say to him, that I have a brother in Illinois who is somewhat largely engaged in raising the kind of clover seed that Mr. D. inquires for, as also timothy seed.

In March 1857, my brother forwarded to me by express, one bushel of his clover seed; a portion of which I sowed in the spring following, with wheat and oats. This season I have had a prodigious crop of clover, yielding, I have no doubt, at the rate of at least four tons of dry hay per acre. Much of it was five feet high; it lodged badly, somewhat to the injury of its feeding quality. A portion of the crop was cut for hay, and the balance left for seed, which is now (28th of August) uncut, the seed not yet fully ripened. I should very much liked to have seen the mowing machine that could have walked through the field without clogging, as also the plow that could have put this five feet clover out of sight.

My brother's address is, Charles H. Bartlett, Diamond Lake P. O., Lake county, Illinois.

I paid four dollars express charges on the bushel of seed. It came from Chicago via Boston, to my place in New Hampshire. If it had been forwarded per railroad as freight, the cost probably would not have amounted to half the sum charged by the express companies. LEVI BARTLETT. *Warner, N. H.*



Newman's Thornless Blackberry.

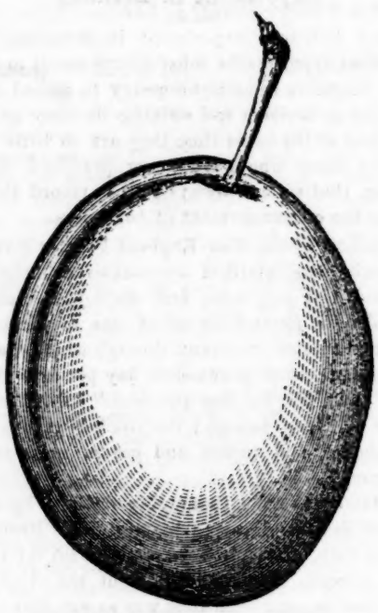
Messrs Tucker & Son—I send you engravings of Newman's Thornless Blackberry, just the size of the berries as ordinarily found. Charles Downing decribes this fruit as follows:

A new variety discovered by Jonas Newman, Ulster Co, N. Y. Promises to be valuable; growth not so vigorous as New-Rochelle and Dorchester, but produces abundantly of good-sized oval berries of excellent flavor; the canes have but few spines or thorns in comparison to the others, which is an important consideration. An excellent variety, and an acquisition for the garden and family use. Ripens about the first of August. A. A B.

Market Pears.

Will you please give me the names of half a dozen of the best market pears? B. *Cayuga Co. N. Y.*

Perhaps we cannot do better than name the list adopted two or three years since, after a very full discussion, by the Fruit Growers' Society of Western New-York, viz, Bartlett, Louise Bonne Jersey, Virgalieu, Vicar of Winkfield, Easter Beurre, Glout Morceau, Flemish Beauty, Sheldon. The vote was unanimous for all these except the Winkfield, for which there were 24 votes and seven against it. It was understood that each cultivator should exercise his judgment whether to use pear or quince stocks for these. Quince would undoubtedly be best for the Louise Bonne Jersey, Glout Morceau, and Easter Beurre; either might be employed for Virgalieu or Winkfield; and for Bartlett, Flemish Beauty and Sheldon, pear stocks only. The Onondaga, Bloodgood, and Tyson were proposed, but were not adopted. This list must be modified with localities and circumstances—for instance, in some parts of western New-York the Virgalieu has been found to crack and become worthless, while the Duchess of Angouleme, at some places, has proved more profitable than any other. The Doyenne d'Eté is a very productive, although rather small, very early pear—a friend sold his crop this year for $4 per bushel.



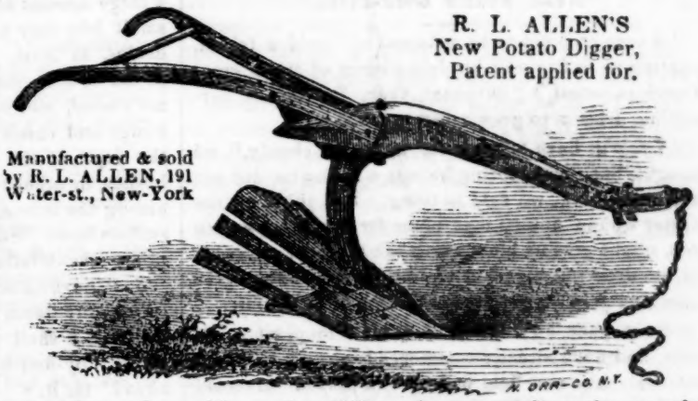
Prince Englebert Plum.

The above figure of this fine new plum is taken from specimens received from Ellwanger & Barry of Rochester. It is an exact representation in form and size of those received. This plum is a Belgian variety. The fruit is quite large, oblong-oval, deep blueish purple, with a dense bloom; the stem is rather slender, set in a distinct ring at base, and in a rather deep narrow cavity; suture distinct; flesh very juicy and melting, with a pleasant, moderately rich and excellent flavor, parting from the stone. The tree is said to be a free grower, and to prove very productive. It ripens the latter part of 8 mo. (Aug.) The shoots are downy.

Management of Scarlet Fever.

In a recent conversation with one of the most skillful physicians and eminent physiologists of this State, who had had a long and extensive practice, the conversation turned upon the treatment of scarlet fever. "I suppose," we remarked, "that this disease is more dreaded by physicians than any other, from its capricious character?" "Yes—to tell the truth, when we meet with a case, we really don't know what to do—and, therefore, I—do nothing." "Would it not be best to use at least palliatives?" "My whole practice is this—when the fever first comes on, and the patient is hot from fever, I have him sponged with cold water; and continue the treatment as long or as often as it is agreeable, or relieves the suffering. Afterwards, as he becomes weaker, the water is gradually made warmer; the sensations of the patient being the guide. At the same time, he is allowed to drink all the cold water he wants—which he will never do in large quantities (as he should not) at a time, if it is always within his reach. I have known some to drink in this way, by small portions, a quart in an hour. After a while, this produces more or less perspiration, which greatly relieves the symptoms. This is my whole treatment. Nothing is more pernicious that the practice of giving powerful medicines in this disease. The fact is, many scarlet fever patients are drugged out of existence!" We learned that this physician, with a long and extensive practice, never lost but two patients of scarlet fever.

Allen's Potato-Digging Plow.



Digging potatoes by hand is a most laborious task We are glad to find the attention of inventors turned to some means of doing it by horse labor. We have recently made a trial of the potato-digging plow, manufactured by R. L. ALLEN of New-York, and find it a great saver of labor. The figure nearly explains its construction. It weighs less than a hundred pounds, and is easily drawn by two horses. There should be a driver, as the plowman needs his attention to keep it in the center of the rows. It throws a double furrow, like a shovel-plow, and turns the potatoes out of the ground, throwing them on the surface with great rapidity. A very small portion remain covered, but they are easily raked out. Our trial was made on heavy and unfavorable soil, where we think it saved at least three-fourths of the labor of hand-digging. On lighter soil, we have no doubt that its operation would be still more advantageous and perfect. It works best, of course, in clean, well cultivated land, but the standard being high, it is not easily clogged with weeds or potato vines. Its depth may be accurately gauged, so as to run just beneath the potatoes.

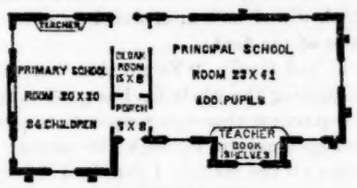
It is said to answer a good purpose when used as a cultivator of corn and potatoes, throwing the earth both ways—of which we have no doubt from a partial trial. The price is $10.

Design for a School House.

EDS. CO. GENT.—Enclosed I send you a sketch, and a hastily made plan, intended only to explain the drawing of the District School House now building at

this place, and of which we feel quite proud. The material is a coarse sandstone—walls of rubble masonry. The roof finished to the collar beams, half way up the rafters, and ceiled—the rafters, collars and ceiling

Section showing height of ceiling.



GROUND FLOOR.

joists being dressed and champfered. The side walls are to be plastered to within three feet and three inches of floor.

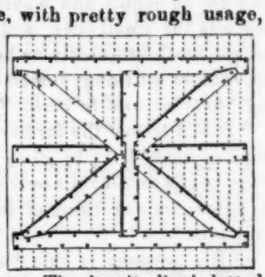
This little building, at a cost of about $1,800, will give us accommodation for near 200 scholars, and at the same time is, we think, a respectable looking and durable sort of "school shanty." T. L. H. *Morley, St. Lawrence Co., N. Y.*

[We have reduced and finished the sketches sent, to a proper size for insertion, regarding it, as we do, an excellent design.]

THE GALLOWAYS.—Will not some of your Canada readers give us, through the Co. Gent, an account of the Galloway breed of cattle, which I believe are bred there to a considerable extent? S. L. B. *Maine.*

Barn Door.

MESSRS. EDITORS—I send you a drawing of a door for a carriage-house, barn or any building requiring a large door. A door of this kind hung to a post framed into the building and let into the ground, I have been using for *ten* years. It is ten feet square—all made of inch poplar plank seasoned—each plank six inches wide. In that time, with pretty rough usage,



Inside view of door 10 ft. square, with representation of braces, shoulders, nails, &c. The hinges go opposite the braces, and nails through strap and brace.

Door 10 feet square of seasoned poplar plank, one inch by six. Hinges wrought iron, 3 feet six inches long, 3 inches wide at but, regularly tapered to the point. The pivots heavy and points in post from 8 to 10 inches long. The longitudinal dotted lines represent the plank.

it has not swayed one-fourth of an inch, and how can it with strong hinges and posts permanently fixed in the ground, braced and supported as it is? Though I am more familiar with the scalpel and spatula than the adze and square, yet when required I can bring into use pretty considerable mechanical talent. The door is of my own getting up, and if it will be of any use to the readers of your journal, you are welcome to it. WM. KENNEY. *Millersburg, Ky.*

Treatment of a Sick Cow.

EDITORS CO. GENT.—Having had a cow sick with symptoms similar to those described in the first no. of the Co. Gent, (p. 12,) I thought I would give you our treatment. When we found her at night, (she was well in the morning,) she looked very thin, and we thought she would not live till the next morning. We went to the pork barrel, took out a piece of fat pork, and cut off a half a dozen slices as large as your hand—rolled them one at a time in common house mustard, and crammed them down her throat. In an hour or two gave her a bran-mash, and the next day she was well. Pork and mustard will cure cattle that have been buckeyed. S. *Granville, O.*

"Next Year's Corn-Field."

"A corn crop not to be ashamed of," said a friend, pointing us to five well-burdened acres of "the great American cereal," "but next year, Providence permitting, I mean to grow a better one."

"You will have to work for it pretty closely," we thought, but remembering he was a man who did not fear close work, we said nothing. But thinking the farmer who in August lays plans for *next year's* corn crop, might give us hints worth the notice of our readers, we drew out his plans and projects, and shall give them pretty much in our own fashion of scribbling.

"Next year," said he, "I intend to plant seven acres, and have already commenced getting the field in order. The new field will take in part of three old fields—so there are fences to move and re-lay. One end of the lot was recently attended to."

"One might make quite an improvement in this and other farms by following some system in their division," we suggested.

"I believe you," he answered, "and that is what I now aim at. We have settled upon a plan for remodeling our fields, fenced now almost every way but symmetrically, and begin on this one. A lane down the center, with five seven-acre fields on the west side, is as much as we dare undertake just now—other moves wait until these are accomplished."

"A good idea,—it is only yesterday your neighbor C. gave up a valuable improvement, because he could not fully accomplish it immediately. Many a farmer, because he cannot find leisure for large improvements, neglects the small ones, and begins none, because he cannot finish as quickly as he can plan them. Happy he, who in all things remembers the wisdom of learning '*to labor and to wait.*'"

"It is a lesson the farmer *must* learn; in making improvements I try to go as far and as fast as I can. Next year's corn-field needs a great deal of work upon it, before we can think of its doing better than this year promises."

— His account of this "deal of work," we shall condense into numbered paragraphs according to the different subjects.

1. "In *fencing*. I think it worth while to keep rails of like quality together. In almost any old fence there are rails perfectly sound, which will outlast half our new rails—these laid by themselves make a fence which does not call for immediate repairing. The poorer rails will last awhile,—I shall have enough of the old fences for three sides of the field, and finish the lane end with a new one. Stakes and caps make it secure—not easily thrown down by high winds or unruly animals.

2. "*Draining* is needed only on certain parts of the field. The great part is a gravelly loam, but this clayey depression, where the clover froze out last winter, needs an underdrain or two. All the field shall be made alike, in this respect, if draining will do what you say of it. Now, water is entirely too slow in getting out of the soil—we must hasten its departure.

"Having *small stones* on the ground, in piles here and there; to get rid of them we shall make stone underdrains. It may take more labor to put down stone than tile drains, but less money is required and a nuisance is buried out of sight. If I was going to do a large amount of draining, I should use tile, but for small jobs they are usually very expensive. Dig the drains, at least, thirty inches deep, ten inches wide at the bottom, set up two flat stones (almost any stone not *round*, will work in) leaning against each other, wedge and chuck in, and fill up with small stone half the depth of the drain. Lay on straw, weeds, small bushes, or other rubbish, to keep the dirt from getting among the stones, and then fill it in a little above the surface level. Such a ditch, I finished up yesterday in my wheat fallow.

3. "*Large stone*, not suitable for filling drains, will furnish my team work for a day of light snow next winter. I shall need them for underpinning a new stable, by-and-by, and may as well be 'looking ahead' for it.

4. "But to get that 'better crop, next year,' I must have *more manure*. And, there is not a day so dull at any season, that it may not be profitably employed in adding to the stock. Next week, all I have left after dressing my wheat ground, will be drawn and spread upon next year's corn-field. John Johnston first incited me to try the experiment, and I begin to believe in it. Last year in September, we drew out and spread a quantity on the green sward now planted to corn, and I find it fully equal to long manure; and better in acting sooner upon the young corn. I hope now to give it a more extensive trial, and may in time get fully established in the faith.

"*Muck* beds lie handy on our farm. I shall draw on them more extensively than ever this fall—they add much to the amount and value of manure. I find that a compost, one-half muck and one-half barn manure, is fully equal to the whole quantity of barn manure for corn, or any crop. At least I can see no difference in the results where I have tried it.

"A little *manure in the hill*, in addition to a good dressing over the whole field, tells largely on the corn crop. That field all looks very well, but you will find an essential difference in the growth where a handful of muck and hen manure was placed in the hill before planting, and where none was used. It started earlier and stronger, tasselled and silked out sooner, and I think will ripen four or five days sooner than other portions of the field.

5, and finally. "To get that 'better crop,' I depend on making the whole field as good as the best of it now is—giving it thorough preparation, plenty of manure, and good culture through the season. I shall try to make all the manure I can, and that of good quality; and also secure some good fertilizer for every hill, from the contents of hen-roost, privy, and hog-pen, and I believe I shall be able to show you a good seven acres of corn next September."

— Who of our readers cannot do better than heretofore, by beginning now their preparation of "Next Year's Corn-field?"

Saving Corn Seed.—Remember, that every new plant raised from grain, is more or less a *new variety*—and to have it constantly improving, save the very best. In husking corn, take such ears as are finest, and from the most prolific stalks. Ten years of constant care like this, will, step by step, effect a great improvement. Potatoes, not being raised from *seed*, but only by a multiplication of the same plant, will not thus improve.

Farming on the Onondaga Shales.

Eds. Go Gent.—Your short article, "No Manure," in the Country Gentleman of the 2d of this month, seems to call for some reply—and the conspicuous position you have given me, justifies reply that might otherwise be considered egotistical.

I received the first premium on farms for 1845, (see vol. 5, page 170, &c., of Transactions) The committee made their report at the annual meeting in 1846, and in it was the following remark in regard to the quantity of manure applied by the various competitors: "No one of these came up to the standard they (the committee) has wished"—and they add, "they do not hesitate to say that in many cases it ought to have been greatly increased." In my report, I had said that I made and used from four to five hundred loads annually. Being present when the report was made, I took issue with the committee, and asserted that I used all that good farming demanded. Out of this grew a discussion, that yet goes on, as often as I meet one of my old opponents in the argument then commenced, who, living on some soil that only pays back the manure put on it, has no conception of what good land is. Such men cannot see how a farm can be self-sustaining, and allow all the grain and meat and wool it produces, to go off to market.

In Central and Western New-York are large areas of land, that, without any manure whatever, except gypsum occasionally sown at the rate of a bushel or so to the acre, and a crop of clover now and then turned under by the plow, produce crops satisfactory to the owners. A large proportion of our own farm has never had any other manuring whatever. Some part of it has been cropped since the last century in this way, and this very year yielded more than two tons of hay to the acre—some of it nearer three tons to the acre.

In 1849, Professor F. W. Johnston, after addressing the State Society at Syracuse, visited some of these lands, and makes in his book, vol. 2, p. 171, the following remarks:—

"I walked over two large fields which had never been manured for the fifty years, which have elapsed since the present owner's father cleared them; and he thinks the land still as good as it ever was. He reaps from 50 to 60 bushels of corn; and, the last year (1848) 30 bushels an acre of wheat. The soil consists, for the most part, of crumbling fragments of the green shale" * * * "On land like this extraordinary green shale land, such severe—what we should call scourging—treatment may be continued a great many years with apparent impunity; although it tells on land of inferior quality."

The land that the Professor saw, was bought of the State by my father, cleared by him, cultivated by him, and by myself, until now it is in my son's hands, and I say with certainty that clover and plaster are the only manures ever put on it—and I am confident that good barn-yard manure drawn one mile from beyond the boundaries of the farm to this field, would cost more to handle it from the time it went into the yard to the time it was plowed into the land, than it would be worth. Now, Messrs. Editors, if you cannot see how this can be so, I know of nothing to say, except to point to the history of the past, and the facts of the present.

Of this green shale, (one of the rocks of the Onondaga salt group,) and the soil made from it—it is safe to say that sixty years of constant cultivation have resulted in constant improvement, and the application of the manure produced by straw and cornstalks and the excrements of the farm stock applied only to fields nearest the barns—and upon tops of knolls and side hills, and the use of clover and plaster, gives the further result, that every year more and more loads have to be carried from the yards to the fields. Twenty-five years since, when we could sell wheat only at profit—when a fat steer would not bring enough at three years old to pay for the labor of feeding him, to say nothing about the food he consumed—we had large piles of straw very much in our way, about the barns—so that at times we threshed grain in fields—and set fire to the straw. Now we cover our yards over with straw, and use cattle and sheep to trample it under foot, and by great exertion, using the snows and rains to wet it up—we get it into condition to pile in the spring in large heaps, having sufficient moisture to ferment and thus become much lessened in bulk. In this way, it is brought into condition to spread on our wheatfields the first of September, or later on our pastures or meadows. Much has been said about keeping manure under cover to save its valuable parts. We clear out our sheds in the spring, and get the manure where the rains will fall on it, in order to rot it. I have conducted streams of water to piles of straw to rot them. Sheds for manure would not pay here.

In September we sow from four to six quarts of timothy seed to the acre on our wheat; in the spring, eight quarts of seed of the medium clover, and a bushel of plaster if the ground is not too rich, in which case the plaster is put on after the wheat is cut. The next year, cut hay early in July, sow a bushel of plaster to the acre immediately, and in September cut a crop of clover seed. The next year, pasture. The next year, corn, or barley or oats. If barley or oats, sow to wheat the same year; if corn, then follow the corn with barley or oats, and sow wheat on the stubble. This is our rotation. On the poorer fields, we sow six quarts of clover seed to the acre on the oats and barley, with a bushel of plaster to the acre. The corn is plastered, or ashes put on the hill; and sometimes we put plaster on the pastures. Now you may not see how land thus treated can endure—but it has for more than half a century, and when it *begins* to fail, will be the time to buy some of the special manures, if the fields are too far from the barns to draw the contents of the yards to them.

Within two hundred feet of our principal yards, is a large bed of swamp mud and muck; we have not yet drawn one load into the yards to increase our manure piles. We have not thought it would pay; whenever the time comes when we think it will, we will draw on that deposite. The barn-yard manure goes to the nearest fields, or on some knoll or hill-side.

Thus, at some length, you have our practice in keeping a farm improving on the soils we occupy. No "cross questioning" is necessary to get at the facts; and I do not allege that manure is of no value on our lands; I merely say that plaster and clover, with a judicious course of farming, will keep our land improving without carting any other manure on the soil.

As to the ten acre field you saw covered with "about as compact a body of fine wheat as possible:" In 1857 this field was planted with corn, and the crop totally destroyed by grubs; so that after planting twice, and having the second growth destroyed, we gave up the contest with the grubs, and summer-fallowed the field and put it into wheat. Did the manure that we put

on the field while used as a pasture, feed and sustain these grubs, and thus destroy our corn? If we credit the manure ten bushels of wheat to the acre, perhaps we should charge it with sixty bushels of corn to the acre, *plus* the cost of the lost battle with the grubs.

You are mistaken as to my manuring corn. It is many years since I have done much at manuring corn; grass-lands and wheat receive the greatest benefit from manure with us. But I think that wheat and grass can be over-manured—as was our ten acre field. The fact that fifty loads of straw gave only a little more than four hundred bushels of wheat, shows this. The raised wheat, that you also saw, gave twice the grain to the same amount of straw. I think that your readers are interested in knowing that this wheat of which we are saying so much, was Mediterranean. George Geddes. *Fairmount, Onondaga Co, N. Y.*

Agricultural Exhibitions.

Vermont.—To begin at the east, we can say little in relation to the Exhibition of this State, held at Burlington, further than that the weather must have been unfavorable at least on Thursday. We learned at Springfield that a number of fine horses, that might otherwise have been expected *there*, were shown instead at Burlington, and have no doubt that this department was creditably sustained. A friend who was present, represents the Exhibition in other respects and attendance as both fair.

Rhode Island.—The Industrial Exhibition, as it is termed in the newspapers, opened at Providence, Sept. 16, and the halls of the association "were full to over flowing all day. The cattle show passed off very successfully. The number of horses on exhibition was greater than on any former occasion. Some very fine animals were on the grounds. The stock of cows and swine was also very good."

New-Jersey.—There were in all departments nearly eleven hundred entries. The Show was held about one mile east of Trenton, upon large and commodiously arranged grounds. The collection of farm implements and machinery is said to have been larger than usual—that of fruits and vegetables less than might have been anticipated in a region so well cultivated and largely devoted to the production of these articles. Wednesday the attendance did not equal the hopes of the management; the afternoon was devoted to the exhibition of horses and mules on the track. Mules and jacks are said to have been a good display; of the horses, the entries were large in number, but the animals themselves do not appear to have been all "up to time." Of five thorough-bred stallions present, the Arabian horse Caliph attracted the greatest share of attention, and was universally admired. This animal was from the stable of the late Abbas Pasha, Viceroy of Egypt, and was imported to this country by ex-Consul Judge Jones of Philadelphia. He is silver-gray, 15 hands high, and 7 years of age." Thursday the grounds were visited by the almost universal storm of that day, and as a consequence the extra trains on the railroads came in almost empty. By 2 o'clock, however, it cleared up, and the weather was delightful, and visitors were more numerous. We have seen no report on the quality or kinds of cattle shown; the number of entries was only 41, while that of horses, mules and jacks was 234, and of sheep, swine, and poultry, 74. In fact horses and the display of manufactured articles, appear to have been the chief features.

Ohio.—The Show at Sandusky appears to have been a great success, though we are still lacking very definite accounts, and have seen no comparison of it with the very successful Cleveland Exhibition two years ago. The turn-out of horses and cattle is spoken of in despatches as "superior in every respect" to that of any previous show. The entries of live stock were 1,054, and the miscellaneous 1,617—numbers unusually large in all departments, except fruits and flowers—those of horses exceeding by 50 any previous year. The Show opened Tuesday with fine weather, which continued Wednesday, when receipts were reported at $8,000. Thursday it is said that about 25,000 persons visited the grounds, and Friday, says the telegraph,—"the fourth and last day, the weather was magnificent and the attendance large. Altogether the Fair has been the most successful ever held in the west, and the display of stock of all classes was better than ever before exhibited."

The *Springfield Horse Show* and the *Pomological Convention* at New-York, are elsewhere noticed. We have no data with reference to the *Illinois* Fair which took place at Centralia, or the North-Western *Virginia*, which occurred at Wheeling. We may add a word, however, as to the Show which took place week before last at St. Louis.

Missouri.—No little exertion was made to render this year's Exhibition (the third) of the St. Louis Ag. and Mech. Association, a most successful and attractive one. Mrs. Gage writes to the O. Farmer that "the crowds of people at the Fair were quite equal, but the display of stock, vegetables, machinery, farming implements, fowls and sheep, decidedly inferior to last year." Emery's Journal says that with the exception of D. Landreth's exhibition of implements, seeds, &c. the show in these respects was very small indeed. The Prairie Farmer gives it as "the general opinion of visitors, that there was a better display of people than of stock. The mechanical department was full." The turn-out of horses seems to have been pretty large, and we notice that in Short-Horn bulls the first premium was awarded to "Crusader," owned by R. G, Corwin of Lebanon, Ohio.

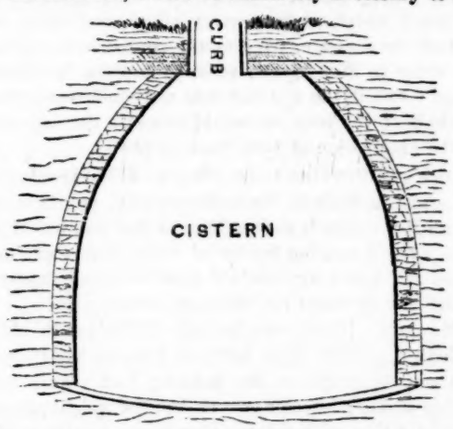
Farm Cisterns.

Our readers have heard of the man who was from year to year annoyed with a leaky roof—because, when the weather was fair it did not *need* repairing, and when raining, he *could not* mend it. In the same way, some farmers neglect to make provision for watering domestic animals, until drought actually arrives, and then they cannot. We well know one, who during the present dry weather, drives his cattle a mile to water, at the same time that he has roof enough on his large barn to give them all the drink they need, if a cistern of proper capacity had been prepared to retain it. The barn cost a thousand dollars; the cistern might be built for fifty—yet every animal of his large herd has to travel nearly thirty miles each week for necessary drink. He might construct a cistern now, but it will be another year before he can derive benefit from it, and so he puts off the labor. It is hardly necessary to

add that he "cannot afford" to take the *Country Gentleman* nor *Cultivator*.

His barn is about 35 by 70 feet—if three feet of rain falls annually, three cubic feet of water will be afforded by every square foot of surface—more than 7,000 cubic feet from the whole roof, which would be about 1,700 barrels. This would be enough to water daily, *the year through*, (each animal drinking each day four twelve-quart pailfuls,) thirteen head of cattle; but if this water were reserved for the dry season only, or when small streams are dry, thirty or forty head might be watered from the roof.

Every man, almost, makes his cisterns too small, and often they do not hold a tenth part of the discharges at the eaves. In the above mentioned instance, it would not be necessary to construct one large enough to hold the entire 1,700 barrels. If the cattle were watered from it the year round, and its contents thus constantly drawn as it fills, one large enough to hold 400 barrels would do; but if used for the dry season only, it should be more than double. A cistern 14 feet in diameter and 12 feet deep, would hold about 400 barrels—20 feet in diameter, and the same depth, would be sufficient for 800 barrels. If built under ground, and contracted towards the top, it would require to be a little larger in dimensions, to allow for the contracted space. Such a contraction, shown in the annexed cut, would be absolutely necessary to admit of convenient and safe covering at the top, and could be effected without any difficulty if built of masonry. An ignorant stone-mason whom we once employed to construct a small cistern of this character, stoutly refused to contract the walls, asserting positively that they would immediately tumble in if thus made to lean, apparently knowing nothing of the security of the *arch*, which this would possess on every side. The pressure of the water outward, would be counterbalanced by the pressure of the earth against the exterior, especially if well rammed in as the wall is built.



Now, at the present time, while the inconvenience of an ample supply of water is felt, and while there will be no annoyance from the streams which at other times ooze through the earth into the excavations made for cisterns, every deficient farmer should take hold of the business, and construct such as may be desirable.

There are some portions of the country where the subsoil is underlaid by slate or other rock which may be excavated. In such cases, it sometimes happens that with a little care in cutting, the water-lime mortar may be immediately applied to the rocky walls, a shoulder above being made on which to build the contracted part only.

The following table, of the size and contents of cisterns, may be convenient to those about to build them. For *each foot of depth*, the numbers of barrels answering to the different diameters, are as folows:—

For 5 ft.	in	diameter,	4.66	barrels.
6	do.	do.	6.71	do.
7	do.	do.	9.13	do.
8	do.	do.	11.93	do.
9	do.	do.	15.10	do.
10	do.	do.	18.65	do.

The contents are doubled by increasing the diameter from 10 feet to about 14 feet, and quadrupled if 20 feet in diameter.

Early Winter Wheat.

MESSRS. EDS.—Within two years past, on two or three occasions, I have given through the columns of the Co. Gent. some account of my experiments in the culture of several varieties of winter wheat, received from the Patent Office. Out of six or eight varieties, there are two kinds that promise well, viz., the Early Noé from France, and another red-wheat from Japan, some ten days earlier than any other variety—this is very accurately described by Mr. KILLGORE, on page 160, Co. Gent. of 9th Sept. I take the liberty of forwarding you a small sample, both in the ear and shelled out. You will see that the grains are somewhat shrivelled, this being the case with all the wheat in this section of the country, as far as I can learn. I think the wheat described by Mr. K., and the sample I forward, must have originated from the same source. I have been extremely unfortunate in my attempts to grow this variety of wheat the three past seasons, having from the small package received, only as yet raised about one pound, which I sowed 31st of Aug., and I much fear the grasshoppers will nearly use that up; I have several times "switched them off," but they have wings and can fly, and legs and can *hop*, so they come back after being thus forcibly ejected. I very much doubt the policy of distributing seed wheat from the Patent Office, among farmers and planters, by the thimble or wine-glass full, and recently have so written to Mr. Commissioner Holt. I do not think that over one package in ten ever amounts to anything valuable to the farming interests. Our friend, John Johnston says, there should not be less than a bushel of the seed sent to any one farmer to experiment with. Mr. J. has "spressed my mind 'zactly" in this matter.
L. BARTLETT.

Green Tomatoes for Pies.

Are all your readers aware of the splendid pies perfectly green tomatoes make? If not, will they not try them before the season closes? If they will give them a trial, we feel certain they will have found an article for the purpose they would hardly have suspected was so easily raised, yet so nice. Doubtless many of your lady readers know all about it, and will give you some items how they should be made. The writer professes only to know anything about the matter in the eating: hence can only draw the attention of it to others, merely mentioning, however, that they require to be first stewed. The smaller the fruit the better; hence the little Grape tomato is just the thing for the purpose. E. S.

Inquiries and Answers.

Apple Seed —Being desirous of raising apple trees from the seed for the purpose of grafting, I wish to know if you can supply me with them. If so, at what price per gallon or bushel. I got some in Cincinnati two years since, but not one in one hundred germinated. In our climate—latitude 32° 30′—where our winters but seldom are colder than 15° above zero, what would be the most proper time to sow the seed? H. M Bry. *Monroe, La.* [Nurserymen sometimes furnish apple seed, but they are not often in market. Our correspondent may apply to Hooker & Co., Rochester, or A. Fahnestock & Co., Toledo, O., who may furnish the desired information. The price is usually from six to ten dollars per bushel. The Cincinnati seed which failed to grow, had either spoiled by bad drying, or the pomace had fermented before they were washed out. Two or three days will often spoil them. The seed may be sown late in autumn, if safe from small animals—or very early in spring.

Good seed may be easily distinguished from bad. If good, the kernel is quite white, and adheres considerably to the skin; if bad, the color is not so white, and the kernel generally separates quite freely from the skin or shell]

Fruit Growing, &c.—*L. I., New-York.*—We are unable to advise you as to the best location for fruit-growing, &c., at the West; but we would advise you, for the purposes you wish to accomplish, instead of going west, to locate on Long-Island, or in New-Jersey, or some where near New-York, where you will always find a ready market for all the things you propose to grow. Thomas' or Barry's work on Fruits will furnish you the information you desire about fruit-growing. In making out a balance-sheet, the stock on hand should be put down at its *present* value, and not at its original cost.

"Tabling" Broom Corn.—Can you give me any information in regard to the manner of breaking over and gathering broom corn? I have never seen any thing in the Cultivator in regard to the culture of it. I have about three and a half acres, very nice. Also can you give me the address of any broom manufacturers?—Wm. H. Tupper. *Benton Center, N. Y.* [We copy the following directions, given by a correspondent in one of our former vols.:

When the heads are fully grown, and the seed nearly ripe, it is usual to "table" it,—which operation is performed by taking hold of the stalks some four or five feet from the ground, and breaking them down so that the upper section, with the heads, shall lie in a horizontal position. In doing this, begin say with the outer row on the right side of the field, and turn the heads *in*, or to the left hand, thus going the whole length of the row; then turn about and go the other way, turning the next row also to the left, so that the heads will lie on the first. In going thus through the whole piece, each pair of rows will be tabled together, with a convenient alley or path between, in which to pass up and down at the time of harvesting. When the seed is fully ripe, (or if a severe frost is apprehended, it should he done before,) the heads or brush are to be severed from the stalks, and laid away to dry. This is done with a sharp knife, cutting off just *above* the upper joint. The brush is then carried to the shed or barn, and spread in thin layers on poles or rails, so that the air may have free circulation through it, and left to dry. Care should be taken to spread it as soon as possible after cutting, and to have it in thin layers, as it is very liable to *heat*. A small load got in just at sunset, and left on the wagon till the next morning, has been known to become so much heated as to injure it considerably. Having lain on the poles until thoroughly dry, the brush may be taken down, and the leaves stripped off, which is very easily done, if care has been taken not to cut below the upper joint.

Sawdust Compost —Will you inform me through your paper, of the best manner of making manure out of the sawdust and ashes of a steam saw-mill, and the manure of twenty-five head of mules, horses and cattle stabled throughout the year? I use sawdust from the mill for bedding the stock, and of course most of the liquid is saved and all thrown out together. I occasionally level down the manure heap and cover over five or six inches in depth of the wood ashes made at the mill. All remains *exposed to the weather*. I have thought the decomposition of so large a portion of the heap as the sawdust makes, from exposure to the weather, gave me a more valuable material in the fall and spring, than if the whole were kept dry by sheds. Is this a mistake? W. P. Mellen. *Peach Orchard, Ky.* [The amount of exposure to the weather, for the proper decomposition of compost, must depend upon circumstances. There should always be a considerable amount of moisture through all parts of the heap, to favor proper decomposition. If the sawdust is in very large proportion, this will not always be the case, if it is kept wholly under a shed. But there must not be too much water, so as to carry off or wash away any part of the manure. We would recommend applying the ashes in thin layers, so as to become intimately mixed; and if the sawdust does not constitute at least one-half of the heap, we would make up the deficiency by the application of turf, loam or peat]

Time for Cutting Corn-fodder.—Should corn-fodder sowed in drills in the ordinary way, be left standing until the corn is so near ripe as that you would pull the blades in making fodder of them, before cutting? When cut, how long should it stand in small shocks to be sufficiently cured for the large stack or barn? W. P. Mellen. [Corn sown in drills for fodder should be so thick that little or no corn can grow on the stalks—or about 40 grains to the running foot. This thick sowing makes a shorter growth, but the weight per acre is greater than with thinner planting and taller stalks, as we have fully ascertained by weighing. The denser growth also makes the stalks *finer*, and more readily and completely eaten by cattle, than larger and coarser growth. It should stand till the edges of the leaves begin to lose their green, and dry up—about corresponding with the age of the common corn crop while *glazing*. After becoming *apparently* well dried by standing several weeks in shocks, this small corn-fodder will ferment and spoil if stacked. It should therefore be made at once in large well-capped shocks, to stand till winter; or else, after drying a few weeks, be placed in quite small stalks, with brush or rails perpendicularly in the center for a ventilating hole—and the stack raised a little from the ground on rails, brush, &c., to admit air below, would be still better, but not absolutely necessary. Pulling the blades of corn always prevents the proper maturity of the plant thus stripped.]

Early May Wheat.—E. of Albany, in answer to his inquiry of Aug. 19, is informed that Early May wheat was introduced here three years ago from Nash-

ville, and is a decided success, and is the thing to cure all his complaints. It ripened on my farm this year June 15, and is free from all disease except a slight attack of what we call *scab*. Blue Stem White wheat failed entirely, even in the same fields where the Early May made a good crop. It is a small-grained, heavy, red wheat, weighing 62 lbs. per bushel. It is small in the head, short in the straw, bears thick seeding, and varies in its production from 15 to 35 bushels per acre, according to culture and quality of soil. It has proven itself to be as hardy as rye, standing the three past winters well. Its uncommon early ripening would recommend it to the consideration of northern growers. About 250 acres were grown this year in this vicinity, all of which will be sown. A. KILLGORE. *Fernleaf, Mason Co., Ky.*

MAY WHEAT.—Messrs. COBB & Co, 21 and 22 Central Wharf, Buffalo, write us: "We notice in Country Gentleman an inquiry for "May wheat." We have a few hundred bushels selected by our Kentucky *white wheat* correspondents. We have already sold several hundred bushels in this region for seed. It is a medium sized, amber colored berry. As to the time of ripening, we can only say that in Kentucky it is about one week earlier than the white, which has been tried here for two seasons, and ripens one week earlier than our home varieties, and has escaped the fly for two harvests past. What the "*Amber May*" will do we cannot say. As to its quality for flour, there is no better bread substance. We can supply it here for $1.50 per bushel at present—bags 25c."

WHITE RYE.—Can you or any of your readers, inform me where the large white rye can be obtained? We have plenty of the small black rye in this country, and, as far as I can learn, no other. We sow or raise more or less every year for the straw as well as the grain. The white rye makes bread nearly as white as wheat, and said to be more healthy; and yields more than the small. VERRY ALDRICH. *Arispe, Ill.*

SHEEP AT THE WEST.—I have for some time past wished to ascertain some reliable information in regard to keeping sheep, but have been unable to—hence this. Will you or some of your numerous readers please inform, 1st. How many sheep can be pastured per acre on good clover and timothy? 2nd. How many—per ton of hay—in winter? 3rd. What variety would you prefer for the West? 4th. How many bucks per 100 sheep? 5th. How large surface of shelter will accommodate 100 sheep? J. B. JONES. *Clinton Co., Iowa.*

DAHLIAS.—I should like to inquire how to preserve Dahlias double—that is, if they change from double to single, as I have been told they would. S. [Dahlias, propagated from the roots, will not change—if raised from the seed, the character of the flowers is uncertain.]

CHURNING MILK.—I am desired by E. O. JOHNSON of Islip, L. I., to ask of you information in relation to making butter from sweet milk. His farmer, or dairy-man, wants to know the whole modus operandi, to the end that he may resort to that method, in damp weather, when they cannot get the cream except in a bitter state.

[The process is the same as with cream; but as the bulk is very great, and it would be laborious to churn by hand, it is advisable to have a one-horse power to drive it. The quantity of butter is greater than when the cream only is taken.]

LIQUID MANURE.—Where there is a sufficient decent from the barn to draw off the contents of a cistern without pumping, is it best to let the liquid separate from the solid manure, or compost both behind the cattle. *N. Watertown, N. Y.* [A good compost heap will save the liquid manure, and unless the machinery and facilities for distributing liquid manure are at hand, it will be easiest and best to adopt the former.]

SIMPLE INFORMATION WANTED.—I know you are troubled with thousands, and what seem to well informed agriculturists, foolish questions and requests, but your paper is read by as many thousands who wish information more in detail than those already learned think necessary to give. It has occurred to me that one short article in every number of your paper, giving an explicit and exceedingly simple instruction, so that one who never heard of the subject before may understand and practice, as to the propagation of every kind of fruit tree and flower from seed, grafting, budding, &c., would be profitable to very many of your readers. Many persons are so situated that they cannot avail themselves of nurseries, gardens, &c., for fruit orchards, flowers, &c., and really remain destitute of these things for many years, when one year of your paper would enable them to do these things for themselves, and a single number would be regarded by them, containing such an article of instruction, as worth the year's subscription price. WM. P. MELLEN. [The suggestion of our correspondent is a good one—we had already intended to act upon it another year, by giving *seasonable* hints on these subjects.]

PLOWING AMONG STUMPS.—I recently bought 100 acres of land south of this, and find it full of small stumps and roots. I am desirous of putting it in good cultivation. Now what kind of plow, cultivator or other tool, would you recommend. A NEW SUBSCRIBER. [It is always very difficult to plow among the roots of stumps, until they are decayed. The best way is to seed down with grass for a few years, which may be done by making a harrow with the teeth inclining backwards, so as not to catch in the roots. Partial and repeated plowings will sometimes prepare such land for corn or sowed grain, but the plowing is laborious. In five or six years, most of the roots will be decayed, of common kinds of trees. Pine roots are almost indestructable, and the stumps must be extracted by stump machines. Small low stumps may be made to decay more rapidly by heaping earth or turf on the top. Stumps may be extracted with a machine when partially decayed, or burned with fire during a very dry time.]

GIBBS' ROTARY DIGGER.—Please inform me where Gibbs' Rotary Digging Machine can be had, and the price. J. L. C. C. [We are unable to answer this question.]

AN ICE HOUSE NEEDING IMPROVEMENT.—I have an ice house above ground, twelve feet square; joists at bottom with a loose floor, so as to let all water through; a cement bottom below the floor to catch the drippings, with sufficient pitch to carry the water to a certain pipe on one side which leads to a milk cellar, with the pipe arranged so as to remain full for the purpose of excluding the air from the ice below. Now why did it not keep ice? I had it surrounded with rye straw and well covered with the same; a good shingle roof lined

under the rafters, and the vacancy filled with straw; they tell me to try packing my ice in saw dust but how can I do that, without its dropping through with the water and stopping up the lead pipe? I have had nothing the past season between the weather boards and lining. I though I would fill the vacancy with saw dust. Any information before ice time will be thankfully received. The house is ventilated at top. E. Oliphant. *New-Jersey.*

Lime or Concrete Brick.—I have seen some mention made in your valuable monthly of the lime or concrete brick; can you or some of your correspondents tell me how they are made, and what sort of apparatus is necessary? What is the cost of the machine, where can it be had, &c? S. W. H. *Tennessee*

Inquiry.—I have a fine Devon cow that has a horny hoof; that is, the hoof has grown very long and turns up like a buck's horn. Can you or any of your subscribers inform me of any remedy through the columns of your valuable paper? S. L. P. *Wadesville, Va.*

Will you please inform me to what crops sheep manure is best adapted? B. F. Davenport. *San Luis Obispo, Cal.* [Sheep manure is similar to common stable manure, except in being finer in texture and more concentrated. Hence it may be applied to any crops that are benefitted by ordinary manure, only in less quantity, as it is about three times as powerful as common farm-yard dung.]

Thomas' "Farm Management."—Please inform me, through the *Cultivator*, if "J. J. Thomas' Prize Essay on Farm Management," is on sale, and if so by whom, and at what price. G. K. O. [An enlarged, re-written and illustrated edition of this excellent essay will appear in *The Illustrated Annual Register* for 1859, which will soon be ready and for sale at this office—price 25 cents.

Hedges and Screens.—A correspondent wishes to know the difference between a hedge and a screen. A hedge is a living *fence*, and may be made of any thorny tree, or of evergreens, provided it will serve as a barrier against intruders. A *screen* may be in a line like a hedge, or planted irregularly; it serves only as a shelter from wind, or to shield unsightly objects from the sight.

Sour Milk.—Will you be so kind as let me know (if possible) why milk of the same milking will get thick, when some will be hardly sour? I have thought that it might be in different positions, but I find that makes no difference. M. A. Arnold. [The same thing is often observed. It may be owing to some impurities hastening fermentation. A pan which has previously contained sour milk or other acid substance, even if washed with some care, might still have a minute portion, enough to start the souring process. Hence the importance of the utmost cleanliness.]

Inquiries—Hay Caps—Tile—Books.—I noticed in the April Cultivator, an article on the value of hay-caps, and the experience of some New-England farmers on their use, but none of them stated whether they used any application, either oil or paint, on them. Now we wish some one would inform us through the columns of the Cultivator, if any application is necessary or not (1) Also, I wish to know the nearest place to Wyoming county that drain tile are made, and the names of those manufacturing them (2.) Also I would propose that you occasionally publish a list of such books as you have for sale, in The Cultivator. Have you Milburn and Stevens on the Cow and Dairy Husbandry, and Munn's Practical Land Drainer?(3.) D. Bostwick. *Eagle, Wyoming Co., N. Y.* [1. Will some of our subscribers who have had full experience with hay caps, please answer the inquiry. 2. Drain-tile is made in many places in western New-York, but as the manufacturers do not advertise, we cannot say which is nearest to Wyoming county. There are three tile factories in Union Springs, for example, but they are unknown abroad for the reason stated—one at Palmyra, another at Waterloo, East Bloomfield, &c. 3. Munn's Land Drainer is sent by mail, postage paid, for 50 cents, and Milburn for 25 cents, by A. O. Moore, publisher, New-York.]

Plants to an Acre.—In your August Cultivator, I noticed an account of 7,200 heads of cabbage raised on an acre, planted one yard apart each way. Will you please inform me by what mathematical process I can put that number of hills on one acre, and have them three feet apart each way. Wm. T. Smith. [We must refer this question to our correspondent, Mr. Sidebotham, on whose authority the statement was published. There was evidently an error in the statement, and we think it probable that the cabbages were planted three feet by two, instead of three feet by three, as stated, as this would give the number of plants named.]

Bainbridge Town Fair.

The second annual fair or cattle show of the "Bainbridge Agricultural Society," was held at the village of Afton, on the 8th and 9th of the present month. This Society has, in the village of Afton, leased a piece of land for a term of years, for the purpose of holding their fair at this place each alternate year. They have enclosed it with a suitable fence, and erected a substantial Floral Hall. With a surplus of funds on hand, and a mutual good feeling established between the villages of Bainbridge and Afton, this society may now be considered a *permanent institution.*

The fair was all the most sanguine could have wished. The weather was clear and beautiful. The entire stock of the town seemed to have turned out, "en masse," to assist in celebrating these, our farmer's holidays. At an early hour not a pen or post on the spacious grounds was unoccupied. Floral Hall was soon filled with mammoth pumpkins, beets, &c. The show of fruits and vegetables was superior. Mr. E. Garrett's case of apples, containing 56 varieties from his own orchard, attracted much attention. The large ripe purple grapes from the grounds of Col. R. W. Juliand, showed that this tempting fruit can with proper care, be successfully grown even in this northern latitude. The beautiful specimens of embroidery, bed-quilts, &c., proved that the fair hands of the farmers' daughters had not been idle during the past 12 months. Many specimens of rich yellow butter and cheese proved the same. Well polished plows and other implements glistened in the bright sunshine. Messrs. Aultman and Miller's "Buckeye Mower" was followed by many admiring eyes, while showing its lightness of draft, and its capabilities of easy transportation.

The rush that followed the entrance of two thoroughbred bulls, brought to mind the old sporting proverb, '' blood will tell." One was the Short-Horn Bull Sultan, (2270½, 3d vol. A. H. Book,) now two years old, weighing but little less than 2,000 lbs. He was bred by F. M. Rotch, Esq. of Otsego Co., and now owned by

Jos. Juliand, 2d, Bainbridge. The other was the North Devon Bull "Metropolitan," bred by R. H. Van Rensselaer of Morris, Otsego Co., and now owned by John Banks of the former place. They were the centre of attraction whenever upon the ground. The one so characteristic of a Short-Horn, of great size and weight, true form, perfect handling—the other a perfect Devon, sleek haired, a faultless symmetry of shape, &c.

The speed shown by several young horses, now trotted for the first time in public, showed that the farmers' boys were interested in changing the old slow moving plow horses, for a breed of horses that can be called the horse "of all work"—that, like a true Morgan, can toil at the plow willingly, and on these annual holidays show a proper speed and spirit.

The fine address of Riley McMaster, Esq., was listened to with great attention. It was a production of decided merit. In this matter our Society has concluded to differ from most others; instead of sending for some "noted man" who will "draw a crowd," we have thus far, each year, listened to the efforts of one of our own citizens, practical farmers themselves, and *sons* of farmers. The large attentive audiences show the complete success of the experiment. J. J.

Grain Stubble.

Messrs. Eds.—On land where I grew winter wheat and oats the present wet season, I have a capital catch of grass—clover, timothy and red top. I do not wish to feed it this fall, because the cattle would poach the ground badly, and pull up much of the young, tender-rooted grasses, greatly to the injury of the future hay crops. If left uncut and unfed, I fear much of the grass will be smothered by the dense growth and stubble left on the fields; besides, I should fear great injury by the operations of field mice, under the protection of such a shelter as they would find. Will it be safe to mow the stubble and grass, and secure it for winter fodder? Under such treatment, would the grasses be more liable to winter-kill? Or, would it be a better way to mow and spread the crop evenly over the ground, and leave it there to rot and enrich the land? If you or any of your numerous correspondents can advise in this matter, they would greatly oblige A Young Farmer. *Plainfield, Aug.*, 1858.

Remarks.—It is the general practice among farmers in many sections of the country, to give their cattle full range of their mowing and stubble fields as soon as their crops are harvested, utterly regardless of the injury sustained by the tender grasses in the grain stubbles.

Great injury, no doubt, frequently arises to the succeeding hay crops from the trampling and poaching of the soft soil by the feet of the larger stock, and the plucking up of the tender rooted grasses. If left uncut and unfed, the bad results from smothering and depredations of field mice, might sometimes result in serious injury, more especially if the ground beneath the snow should remain unfrozen through the winter, as is frequently the case. The mowing and leaving the crop spread upon the surface of the field, would not much remedy the evils above named.

Upon due consideration, we think it the better way to mow the stubble and grass for winter forage, wherever there is a thick and heavy growth of grass in stubble fields. The fodder, if well secured, would be equal to second crop hay. The stubble would be out of the way of the next year's clip of grass, and would, mixed with the manure of the cattle as bedding, prove much more valuable than if left in the field to dry and waste away. If cut early in September, a new growth would start up sufficient to protect the roots of the grasses from the colds of winter, and yet afford but little "aid and comfort" to the field mice.

If very dry weather succeeded the grain harvest, there might not be enough grass to pay for cutting; in that case, it might be well to pass a heavy roller over the stubble, which, with the snow of winter, would lay it so flat as to put it out of the way of the scythe next hay season.

Since penning the foregoing remarks, we have had a 'talk' with a farmer who has long practiced mowing most of his stubble fields. His reasons for doing so are, that he does not feed his newly sown grass fields. That he usually obtains more forage than the cost of cutting, &c., and the fields are cleared of the dry stubble which sometimes makes the next year's mowing very hard work. There is no harbor or shelter for the field mice, and the wormwood and other weeds that sometimes spring up after the grain is cut, are removed before the seeds ripen, which prevents their seeding his grounds. To the inquiry—"is not newly set grass more liable to winter kill, in consequence of the removal of grass and stubble,"—his reply was, 'if mown in September, there would, at the setting in of winter, be more covering for the roots of the grasses, than there would be if fed off by cattle, who frequently have the full range of the fields till the setting in of winter."

Most farmers might easily satisfy themselves in regard to this matter, by mowing the stubble of one field, leaving another uncut and unfed, and closely feeding a third field. Such an experiment might impart to them valuable information.

Rhubarb Wine.

A correspondent of the *Irish Farmer's Gazette*, furnishes the following receipt to make one gallon rhubarb wine:

Take 5 lbs. rhubarb, cut it small, and let it stand in water four days, then bruise the rhubarb, and strain it through a fine sieve or loose towel; add three and a half lbs. good soft sugar; boil it three-quarters of an hour; add, when boiling, half lb. bruised raisins, the white of an egg, and a little isinglass, work it in a jar with a little yeast. It will keep for ten years, and improve, if well made. T. C. *Clonmel, Aug.* 1, '58.

Small Fields for Pastures.—Thaer says "a much higher rent is paid in England for pastures surrounded with hedges, than for those unenclosed, and the more so in proportion as the enclosures are of smaller dimensions." It is thought that "fifty acres of land, divided into five fields, will fatten as many cattle as sixty acres of land all in one piece." The reason of this is in the protection afforded by the fences, but more in the facilities afforded for *changing pastures*, so that while the cattle are feeding in one enclosure, the grass shoots up again undisturbed in the others, without being trampled upon by the feet of animals, as it would were they allowed to ramble over the whole.

Notes for the Month

A Good System and Good Soil.—In another column (p 315) will be found an interesting and really instructive article by Hon. Geo. Geddes, embracing the system of farming, by which he has not only maintained, but, if anything, increased the naturally very high productiveness of the soil on which he resides. The object of the editorial note published in the Co. Gent. a week or two since,—to which Mr. G. alludes,—was merely to call attention to the fact with which a personal visit had made us acquainted, that *all the credit* of Mr. G.'s fine crops was *not* owing merely to the innate fertility of the soil; that, knowing that his soil *was* already most excellently adapted to bring large crops, he had shown a degree of wisdom and foresight rarely to be met with among similarly fortunate cultivators, in employing all the means at hand to preserve and promote that productiveness. Had the system which he describes—a system of clover, and plaster, and rotation, and composting,—been employed as shrewdly and systematically by the farmers who first opened up the virgin wealth of many of our eastern soils, that were once what, alas, they now are not,—multitudes of them and their children would be still farming the old homestead, instead of having sold and exchanged it for life on the prairies. And if the voice of this journal was only strong enough to be heard on every western farm, commending to the owner or occupant the propriety of following the example which Mr. Geddes describes, the condition of the western soils, we can but think, would be very different twenty years hence, from what must result under the present agricultural practice. Mr. Geddes says:

"Sixty years of constant cultivation have resulted in constant improvement, and the application of the manure produced by straw and cornstalks, and the excrements of the farm stock applied only to fields nearest the barns—and upon tops of knolls and sidehills, and the use of clover and plaster, gives the further result, that *every year more and more loads have to be carried from the yards to the fields.*"

This is the uniform result of thorough farming; the more manure made, the more there will be made from the heavier crops it has brought; "to him that hath shall be given." But the converse,—that "from him that hath not, shall be taken even that he hath," has also an agricultural application. *Our* whole theory is, that it is utterly unsafe and suicidal for the farmer, at the west, or on the Onondaga Shales, or elsewhere, to crop his fields constantly without seeing that *some* return is made to them; while from the very nature of things, it is evident that on soils so favored as is that occupied by Mr. Geddes, a *less return* is requisite than upon poorer ones. And there may be some river valleys naturally fertilized by the freshets of spring—these affording a confirmation, rather than an exception to our theory. But no farmer, on poor soil or rich, will lose anything by a careful perusal of Mr. Geddes' valuable letter, and an imitation in greater or less degree of his example—if it leads to similar success, our readers will be wiser and richer men.

☞ The editor of a western contemporary, who has labored earnestly in past years, to persuade the ladies of his adopted State, of the exceeding gracefulness and propriety of their exhibiting themselves on horseback to the gentle gaze and kind and delicate criticisms of the crowds that assemble at our Agricultural Fairs,—has just presented his portrait to his admiring readers, and now proposes—having thus attended to his own merits and those of the gentler sex, to give a chance to the *men* of Ohio. He offers to present at the State Fair at Sandusky, "a broad-sword to the heaviest man who will muster in the Falstaff guards, (including three members of the State Board,) no one admitted to competition weighing less than 200 lbs." !! Whether he has the countenance of the august body, several of whose members he thus announces as competitors for the editorial prize, we cannot say; the matter is perhaps worthy of note, as illustrating the ideas which some have, and publicly express, of the dignity and improvement of Agriculture.

New Vol. of the American Short Horn Herd Book.—The Editor of this work, Lewis F. Allen, Esq, of Black Rock, informs us that he is now preparing to issue a fourth volume, in the same style and at the same price ($5) as the 3d vol. Gentlemen wishing the pedigrees of their stock inserted, are notified that they must be sent to Mr. Allen, on or before the *first of December next*, and in order to do this correctly they should apply to Mr. A. for one of his Circulars, in which all necessary instructions will be found.

Fine Pears.—We are indebted to Dr. H. Wendell of Hazlewood, for very fine specimens of Doyenne Boussock and Beurre Thouin pears—the latter a very beautiful variety, but little known, we believe, in this country. In shape, but smaller, it somewhat resembles the Bartlett.

Handsome Pyramid Pears.—In answer to the inquiry of a correspondent, we may state that the following varieties, form the handsomest pyramidal growth: Giout Morceau, Josephine de Malines, Belle Lucrative, Urbaniste, (grows slowly at first,) Beurre Superfin, Stevens' Genesee, Nouveau poiteau, Beurre Langelier, and Theodore Van Mons. The Vicar of Winkfield, although of straggling growth, makes a fine pyramid with but little pruning. Louise Bonne of Jersey, and Duchesse d' Angouleme, although the strongest grown on quince, require a little more care than the preceeding to bring them into perfect form. The Brandywine, so far as we have tried, makes a good pyramid, and the Tyson is scarcely inferior. The Beurre d' Amalis, although one of the most vigorous of all growers on quince stock, is disposed to be an unmanageable straggler. The Rostiezer and Madeleine are sprightly and free growers as dwarfs, but do not branch well into pyramids. The Giffard is a perfect straggler. The Beurre d'Anjou is a moderate grower for this purpose.

Top-Dressing Wheat.—The Genesee Farmer gives a successful experiment with top-dressing a wheatfield with fine manure, harrowing it with the seed. On *clay* or *heavy* soil, we have no doubt this is an excellent practice. In the experiment mentioned, the character of the soil is not mentioned; but if we remember correctly, the region where it was performed (Mendon, N Y.,) has a heavy soil. The manure gives the wheat a vigorous start, enables it to withstand winter-killing, and, by bringing on earlier ripening, to escape the midge. On light soils the manure is soon dissipated, unless in the form of compost; and our own experiments on such soils have not been very successful. It

would no doubt be better on such soils if scattered over the surface after the wheat is up, and towards winter. The winter and spring rains would carry it into the soil. Clayey soils are always the most benefitted by top-dressing, as the manure serves to keep the surface soft and moist, to prevent crusting, and the clay more readily absorbs the volatile parts.

COLUMBIA CULTIVATOR'S CLUB.—Under this head some friends of Agricultural progress have recently united themselves in Hudson, for the purpose of holding weekly meetings, forming a library, and in other ways contributing to their mutual enlightenment. We have before us brief reports of proceedings at the two meetings of Aug. 19 and 26, for which we are indebted to our corresponeent, A. S. ROWLEY, Esq., Secretary. The subjects of discussion were the Strawberry and the Grape, and at the second meeting, some measures were taken for the protection of the gardens and grounds of members from the ravages of depredators. We wish the association all success.

THE U. S. AG SOCIETY'S SILVER MEDAL.—We have been shown the very solid and tastefully designed medal awarded by the United States Ag. Society, of the die of which, when first cut, we presented an engraving and full description in the columns of the Co. GENT The medal before us bears the following inscription: "*Awarded to* RICHARD H. PEASE, *Albany, N. Y., for Threshing Machine and Horse Power. Louisville,* 1857." It is a beautiful testimonial, and should be highly valued.

☞ We learn that Jos. R. WILLIAMS, Esq., the President of the Ag. College of Michigan, has accepted the invitation of Chancellor MCCOUN, Prest. of the N. Y. State Ag. Society, to deliver the Annual Address at the coming Fair at Syracuse.

NEW WHITE WHEATS.—A correspondent of the *O. Cultivator*, reports on the trial of several varieties of wheat sown last year about the middle of September, "on a fine piece of ground on one side of his wheat-field," joining which the Red Mediterranean gave a product of 36 bushels per acre,—one kind, "*Gale's Early Flint*," a very early white wheat of small growth, yielding nearly 35 bushels per acre. The writer, (Wm. N. Smith, of Huron Co.,) thinks this wheat will prove valuable when the midge is bad, on account of its earliness. The "*White Mediterranean*," a very productive white wheat, of excellent quality, not so early as the Red Mediterranean, but stands up better, yielded over 35 bushels per acre. This was on poorer ground than any other kind, but gave an equal product to others on the best soils.

WINEGAR'S GATE.—We invite attention to the advertisement of Winegar's Capstan Gate, and desire to say that we have recently examined his latest improvement, and find it to operate admirably. It is not the original "Automaton Gate," but one of simpler and cheaper construction, the force for opening and shutting being applied to a lever without alighting from the carriage or horseback.

EARLY FRUIT.—We are indebted to our friends ELLWANGER & BARRY of Rochester, for a fine basket of early pears and plums, consisting of a large number of the valuable new as well as standard sorts. Among the pears were fine specimens of the Ott, Pulsifer, Ives' August, Canandaigua, Limon, Madam Ducar, &c., besides many of the more common varieties. The Bartletts being placed in the dark, have ripened into golden-yellow specimens, with broad, rich shades of red on the sunny side, and are some of the finest specimens we have met with. Among the rarer plums, are Royal Tours, Caledonia, Montfort, Prince Englebert, and others. The specimens of the Royal Tours were particularly fine, and their flavor excellent.

TIME OF SOWING TIMOTHY.—A writer in the *Rural New-Yorker* comes out strongly in favor of sowing this grass early in September, either as a crop by itself or on winter wheat or rye; the latter, especially, being an excellent crop to seed down with. He says, "It is now pretty generally conceded that if we want to raise twice as much grain, especially wheat, we must sow only half as much ground." The other half, of course, he would devote to the grass crop.

VALUE OF AG. PAPERS.—A Western correspondent writes—"I have been much gratified and instructed by your paper, and think I have already realized fifty times the value of a year's subscription in the information you have furnished me."

NEW STRAWBERRY.—Mr. J. P. DOWNER, of the Forest Nursery, near Elkton, Ky., has raised a new strawberry which is said to promise well. A committee of gentlemen of the neighborhood, recently met at Mr. D.'s residence, and a copy of their report duly attested is now before us. After saying that they have made a careful examination of the plants and fruit, and a comparison of it with a number of the most popular varieties of this fruit under the same state of cultivation, such for instance as McAvoy's Superior, Hovey's Seedling, Hooker's Seedling, Burr's New Pine, Myatt's Deptford Pine, Longworth's Prolific, etc., they submit the following report and description:

"Vines remarkably large and vigorous, of a pale green color, resembling Peabody's New Hautbois; fruit-stalks long and erect, fruit of the largest size, roundish oval, of a bright scarlet color. Flesh moderately firm, rich, juicy, highly flavored and excellent. Ripens early, and continues in bearing for a long time. Flowers hermaphrodite."

Mr. Downer informs us that plants of his seedling have now borne three crops of fruit, proving very productive and promising; he has determined, however, not to offer them for sale until after fruiting them another season, and subjecting the results to the scrutiny of the best judges. It is proposed to call it "Downer's Prolific Seedling," and we trust it may in the future realize all that is now hoped by its enterprising grower.

KEEPING COWS *vs.* FATTENING CATTLE.—A Putnam county farmer, who for many years kept a milk dairy for the New-York market, but finally turned his attention to fattening cattle, says: "My experience is that I can fat a bullock upon less feed than will keep a milch cow up to full measure of milk." He prefers the Hereford, for the shambles, to any other breed he has tried, and the Ayrshires for milking purposes. Selling milk compared to selling beef, wears much harder on a farm. In the latter case, rich food produces rich manure, which applied to the soil increases its fertility; in the former, it goes to the production of milk, which after a time it is said so deprives pastures of the bone material that cows must be fed bone dust to supply its place, or the grass dressed with bone manure.

IMPORTANCE OF GOOD MILKERS.—An eastern dairyman, keeping twelve cows, from an accident to himself, had to get other hands to milk them. As a result,

there was a falling off of eight pounds of butter the first week, though another cow had been added to the number. There is an essential difference in the products in all cases, as the cows are well or badly milked, and the subject demands the careful attention of every dairyman.

☞ We are pleased to learn that the Trustees of the State Agricultural College at Ovid, at their session last week adopted plans and entered into contracts for their buildings, work upon which is to be immediately begun.

Fine Fruit.—We are indebted to Prof. Jas. Hall for a basket of very beautiful Red-Cheek Melocoton Peaches, from his garden in this city, for which he has our hearty thanks, and also for a basket of Cherries, containing fine samples of Elton, Ronald's White-Heart, Napoleon Bigarreau, Knight's Early Black, Wendell's Bigarreau, and several other varieties, received during the cherry season, and which we inadvertently failed to acknowledge at the time.

A Good Idea—Seedling Grape.—At a meeting of the "Columbia Cultivator's Club" at Hudson, on the 9th inst., the members resolved themselves into a vigilance committee, for the protection of the gardens of every member of the Club from thieves. They also ordered a reward of $25 to be paid for the detection and conviction of any person or persons guilty of stealing fruit or vegetables from the premises of any member, and directed handbills announcing these facts to be properly posted about the town. This measure cannot fail to have a restraining effect upon the thieving propensities of the vagabond men and boys who so frequently go unpunished for their trespasses upon the gardens and orchards of their neighbors.

At the same meeting of the Club Mr. Alvah Calkins presented two specimens of seedling grapes—one the *Early Hudson*, a round, black grape, with a blue bloom, thin skin, tender pulp, very sweet and juicy, bunch and berry about the size of the Isabella, perfectly hardy, and ripens about the 1st of Sept. The vine was raised by Mr. Calkins, from the seed of the Isabella, planted in his garden in Hudson about ten years ago, and has fruited with him for four years past. The other was presented only as indicating the native origin of the Isabella. It was a small, loose cluster, and in size, color, and quality, almost identical with our native Frost Grape. It originated from the seed of the Isabella, and was the production of a three years old vine. A fine specimen of the renowned *Charter Oak* grape, from the garden of Mr. L. N. Gridley, was also exhibited.

R. NUTTING'S FANNING AND ASSORTING MACHINE.—The increasing necessity for such a machine as the above, has long been apparent to even the most casual observer—and for this reason, it meets with the *practical* approval of every intelligent farmer wherever it is introduced; in fact no real farmer can afford to be without it, if he values his reputation as such, and desires to sow only clean and perfect seed. Any person or manufacturer who desires to make a change in, or addition to, his business, or engage in something substantial and profitable, cannot do better than in the manufacture of this machine. A more particular description of it will be found in the "Co. Gent." of Sept. 9th, 1858.

All applications for territory in any part of the United States, (the New England States excepted,) must be made to WALLACE WARREN,
Sept. 16—w&mtf. Utica, N. Y.

HIGHLAND NURSERIES,
Newburgh, New-York.
Formerly A. J. DOWNING & CO.

The subscribers, in soliciting the attention of *dealers* and *planters* of trees to their stock, now ready for the ensuing fall trade, beg leave to say that it embraces everything in their line of business, all of the most vigorous growth and best quality.

The Department of Fruit Trees

Contains a full collection of Apples and Pears, both standard and Dwarfs; Cherries, standards, and on Mahaleb stock; Plums, Peaches, Apricots, Quinces, Almonds, and miscellaneous fruits, such as Walnuts, Filberts, Chestnuts, &c. Also, Grape-vines, (both hardy native and foreign varieties for graperies,) Gooseberries, (best English varieties,) Currants, do., Raspberries, Blackberries, (New Rochelle or Lawton, High Bush or Dorchester, Newman's Thornless, &c.,) Strawberries, &c. Rhubarb and Asparagus roots of the best varieties.

The long experience of A. Saul in these matters, which occupy his whole attention, enables us to guarantee the correctness of all articles sold by us.

The Ornamental Department

Embraces a complete stock of all kinds of *Deciduous* and *Evergreen Trees* and *Flowering Shrubs*, &c., including a large stock of Norway Spruce, American Spruce, Balsam Fir, European Silver Fir, Austrian and Scotch Pines, American Arbor-vitæ, Junipers, Yews, &c., together with the newer and rarer Conifers, &c.; also, Maples, Elms, and Oaks, in six varieties of each; American and European Lindens, Ash, Mountain Ash, Horse Chestnut, Larch, Sycamore, Magnolia, Chestnut, Beech, Birch, Cypress, Acacia, Locust, Tulip Tree, Kentucky Coffee, Poplar, Willows, &c.

Flowering Shrubs, several varieties of Spiræas, Althæas, Tartarian Honeysuckles, Euonymus Europæus, Syringa, Lilacs, Flowering Hawthorns, Weigelia, Forsythia, Tamarix, Deutzias, Dogwood, Buffalo Berry, &c. A large collection of Climbing Plants, Climbing Roses, and Roses of all classes in great variety; Dahlias, Pæonies, Phloxes, Chrysanthemums, and a full collection of Herbaceous Plants and Bedding-out Plants, such as Petunias, Verbenas, Lantanas, Geraniums, Heliotrope, Fuchsias, &c.

Buckthorn and Osage Orange Plants, and Arbor-vitæ for Screens, &c.

20,000 plants and cuttings of Salix triandra and Salix purpurea, the two best Osier Willows in cultivation, as well as other varieties.

A Descriptive Catalogue of prices will be sent to all applicants on inclosing a three cent P. O. stamp to prepay the same. A. SAUL & CO.,
Sept. 30.—w4tm1t. Proprietors.

WM. R. PRINCE & COMPANY,
Flushing, New-York,

Will send their New Catalogues for 1858 to applicants who enclose stamps, viz:

A General Priced List of Fruit Trees, Blackberries, Raspberries, and all small Fruits, Rhubarb and other esculents, *with very reduced prices.* A Descriptive Catalogue of above 100 hundred varieties of Strawberries; a Catalogue of 136 varieties of Native Grapes. Catalogue of Green-house Plants, also one of Garden and Tree Seeds. The above are independent of the following regular Catalogues of the 42d edition. Fruit and Ornamental Trees, Roses, Carnations and all Flowering Plants, Bulbous Flower Roots and Pæonies, Treatise on the Chinese Potato or Yam, the most valuable of all esculents.

Strawberries. — Longworth's, McAvoy's and 20 other standard varieties, $1 per 100. Wilson's Albany, $1.50. Hooker, Peabody & Eclipse, $2. Scarlet Magnate, (largest of all,) Imperial Scarlet and Ladie's Pine, $2.50. Diadem, Le Baron, and Imperial Crimson, $1 per dozen. For prices of others, and full descriptions of all, see our Strawberry Catalogue as above.

N. B.—Staminate Strawberries are physically incapacitated for producing half as much as Pistillates, in field culture. Sept. 23—w&m1t.

JERSEY BULL FOR SALE.—I offer for sale my thorough-bred two-year old Jersey Bull, "Captain Darling." Captain Darling was sired by Prize Bull Jersey Prince, imported from the Island of Jersey—dam Princess, imported from the Island of Jersey. Captain Darling is perfectly gentle and orderly in the pasture or barn, and pronounced by the best judges to be the most handsome, and largest Jersey Bull (for a two year old,) in this or any other country; in symmetry he is perfect.
JOHN GILES,
Sept. 9—wtf. Woodstock, Ct.

PEASE & EGGLESTON—*Proprietors of the Excelsior Agricultural Works, Ware-House and Seed Store,*

No. 84 State Street, Albany, N. Y.,

Have been awarded the very highest testimonials for their Excelsior Horse Power, Threshers and Separators, Saw and Cider Mills, and offer them to the farming community on the most reasonable terms, with a full warrantee to perform satisfactorily in every respect. At the great trial at Louisville, Ky., 1857, by the United States Ag. Society, they were awarded *the Society's large Silver Medal for Horse Power and Threshing Machine, over all others in competition, which is the best testimonial that can be obtained.*

For descriptive circular with prices, address

PEASE & EGGLESTON,
Albany, N. Y.

P. S. Samples of the genuine Atlantic Telegraph Cable for sale at 1s. per inch. P. & E. Sept 9—w2t.m1t.

ANDRE LEROY'S NURSERIES,
At ANGERS, FRANCE.

The proprietor of these Nurseries—the most extensive in Europe—has the honor to inform his numerous friends and the public, that his Catalogue of Fruit and Ornamental Trees, Shrubs, Roses, Seedlings, Fruit Stocks, &c., for the present season, is now ready and at their disposition.

The experience which he has acquired in the last ten years, by numerous and important invoices to the U. S., and the especial culture which he has established for that market, upon an area of over 300 acres, are for his customers a sure guarantee of the proper and faithful execution of their orders.

Apply as heretofore to F. A. BRUGUIERE, 138 Pearl Street, New-York, his sole Agent in the U. S.

NOTE.—All advertisements or circulars bearing the name of Leroy, Angers, must not be considered as emanating from our house, if they do not at the same time mention that Mr. F. A. BRUGUIERE is our Agent. Address F. A. BRUGUIERE, New-York.

Sep. 2—w&m4m. ANDRE LEROY, Angers, France.

BERKSHIRE PIGS, descended from the imported stock of Col. Morris, and warranted pure. For sale at $5 each when six weeks old, delivered at the cars.

WILLIAM J. PETTEE,
Sept. 2—w3tm1t* Lakeville, Conn.

PLUM TREES — Consisting of most of the leading standard sorts, two years from the bud or graft, at $30 per 100; $25 of second quality or one year, and $35 extra selections; for sale by

THOMAS & HERENDEEN.
Sept. 16—w2t. Macedon, Wayne Co., N. Y.

NEW PLUMS.—The Seven New Plums described in August Country Gentleman, are for sale in limited quantities, at 75 cents each.

C. REAGLES & SON,
Sept. 16—w2t. Schenectady, N. Y.

New-York State Tile Works,

On the Western Plank Road near the Orphan Asylum.

THE subscribers still continue the manufacture and sale of Draining Tile for land draining, in large or small quantities, warranted hard-burnt and perfectly sound, and altogether superior to any made in America; if not, the purchaser need not pay for them. On orders for 5,000 or more a discount will be made.

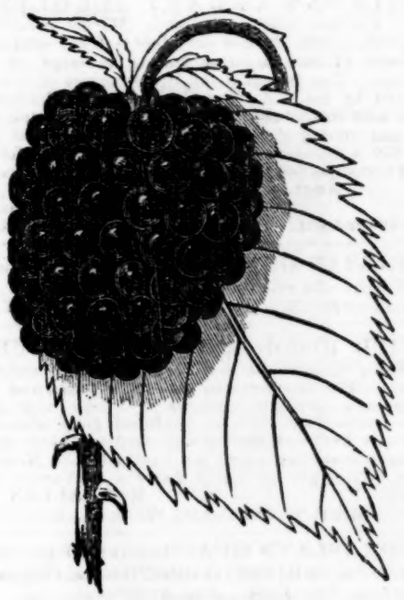
N. B. These Tile are made of pure clay, and very strong.

HORSE-SHOE TILE—PIECES.					SOLE TILE—PIECES.				
2½ in. calibre,	--	$12	per	1,000.	2 in. calibre,	--	$12	per	1,000
3½ " "	--	15	"		3 " "	--	18	"	
4½ " "	--	18	"		4 " "	--	40	"	
5½ " "	--	40	"		5 " "	--	60	"	
6½ " "	--	60	"		6 " "	--	80	"	
7½ " "	--	75	"		8 " "	--	125	"	

Orders thankfully received and promptly attended to. Cartage free. ALDERSON & JACKSON,
Albany, N. Y.

EMERY BROS. Agents, Proprietors Albany Agricultural Warehouse, 52 State street, cor. Green.

April 8—w2m—eow2m—w2m—m6t.

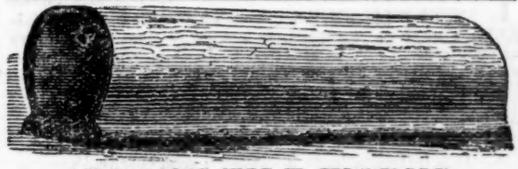


Fac simile from Nature.

THE LAWTON BLACKBERRY—Is unique, and not as some have been led to believe, the common "*New Rochelle Blackberry,*" *improved by cultivation.* It differs in shape, size and color from all others. Is perfectly hardy, enduring the severest winters without protection. The fruit is delicious, having small seeds in proportion to its size; is a prodigious bearer, and in any *good farming soil*, the stalk, leaf, flower and fruit, will grow of mammoth proportions.

This variety only is cultivated by the undersigned for sale, and for the convenience of Clubs, and those who take orders for plants. They will be safely packed in boxes, put up in clusters of one dozen, without charge for package, at the following rates:—A box of 1 dozen, $2; a box of 3 dozen, $5; a box of 8 dozen, $10. To prevent imposition, every package will be marked and branded, and those who purchase from the undersigned will thus secure the genuine variety, without admixture, and purchasers may enjoy this delicious fruit the second summer in perfection. The money should accompany the order, with name and address distinctly written. N. B.—No itinerant plant sellers or travelling agents are employed to sell the plants from my grounds. Address

WILLIAM LAWTON,
No. 54 Wall Street, New-York, or
Sept. 16—w&m1t. New Rochelle, N. Y.



ALBANY TILE WORKS,

Corner of Clinton Avenue & Knox St., Albany, N. Y.

THE subscribers, being the most extensive manufacturers of Draining Tile in the United States, have on hand, in large or small quantities for Land Draining, the following descriptions, warranted superior to any made in this country, hard burned, and over one foot in length. On orders for 5,000 or more, a discount will be made.

HORSE-SHOE TILE—PIECES.					SOLE TILE—PIECES.				
2½ inches rise,	--	$12	per	1000.	2 inches rise,	--	$12	per	1000.
3½ " "	--	15	"		3 " "	--	18	"	
4½ " "	--	18	"		4 " "	--	40	"	
5½ " "	--	40	"		5 " "	--	60	"	
6½ " "	--	60	"		6 " "	--	80	"	
7½ " "	--	75	"		8 " "	--	125	"	

Orders respectfully solicited. Cartage free.

C. & W. M'CAMMON,
Albany, N. Y.

PEASE & EGGLESTON, Agents,
Excelsior Ag. Works, Warehouse and Seed Store,
Mar. 1—w&m8m. 84 State-st., Albany, N. Y

WILSON'S ALBANY SEEDLING.—*The best and most prolific Market Strawberry! Yields 150 to 200 Bushels per Acre!*—I am prepared to sell plants of this superior variety in large or small quantities. The fact that the Strawberries of this kind, marketed by me the present season, were the best and largest sold in Albany, is a sufficient guarantee of the thrift and quality of the plants. Price, delivered in Albany, $10 a thousand—$1.50 a hundred, or $1.00 for fifty. Orders accompanied by cash promptly attended to.

Address WM. RICHARDSON,
96 South Pearl Street,
July 22—m&wtf. Albany, N. Y.

PERUVIAN GUANO—Government Brand and Weight—for sale by A. LONGETT,
Aug. 12—w4tm2t. 34 Cliff Street, New-York.

DRIED BLOOD AND WOOL MANURE.—Fully equal to the best Peruvian Guano, and at half the price. For many crops, especially wheat and roots, and also as a change in manures, it is better than guano. Potatoes raised with it have produced more abundantly than where Peruvian Guano was used, and they are now bringing one shilling more per basket in the New-York market. Price $30 per ton of 2000 lbs., in barrels of 200 lbs. each. R. L. ALLEN.
Sep. 2—w2m1t.* 189 and 191 Water St., New-York.

ELIDE ISLAND GUANO,—at $40 per ton of 2,000 lbs. GRIFFING BROTHER & CO., 60 Cortlandt Street, New-York. Aug. 5—w8tm2t.

CORIA. — This New Fertilizer is manufactured by the LODI MANUFACTURING COMPANY from leather scraps, dead animals, blood, hair and bones, by a newly discovered process—is offered for sale at a price which will bring it into direct competition with Guano and super phosphates. The above mentioned articles are *melted* by chemicals and heat down to a jelly, all the ammonia in which they abound being retained. This jelly is then dried and ground to a fine powder, and barreled for sale. About fifty per cent of the "Coria" is soluble in water, and the rest is very easily decomposed by the action of the elements. Several new agents in this manure give it great prominence in the eyes of those chemists who have examined it—amongst others *tannic acid*, which gives the firmness and flavor to the fruit, making it of great value for fruit trees. As a top-dressing for grass and winter grain, it is beyond comparison.

And we are ready to put it against Guano or any other fertilizer in the market for *quickness* of operation and above all its *lasting* qualities in the soil. It is packed in new barrels, and will be sold for $40 per ton of 2,000 lbs., tare off. For further information apply to

GRIFFING, BROTHER & CO.,
Exclusive agents of the L. M. Co.,
Aug. 19—w6m3t. 60 Cortland St., New-York.

TO PRACTICAL FARMERS AND DEALERS IN FERTILIZERS.—The **NATIONAL FERTILIZER**, a modern compost, is prepared under the direct superintendence of **L. Harper, L. L. D.**, formerly Professor of Analytical Chemistry and Agriculture in the State University of Mississippi, as also State Geologist. Its **basis** is the **Green Sand Marl** of New-Jersey, which is chemically combined with fish and pure animal bone. Letters Patent for this and foreign countries have been granted. It is unhesitatingly accredited **superior** to Peruvian Guano—strengthening the soil and beyond the possibility of exhausting land where applied. **The increase in the yield of plants and all cereals is largely augmented**; while it supplies a **continuous** source of Fertility. **For sandy, barren and abandoned lands**, and where **other** manures have failed, we ask **but one trial**, trusting **solely** upon the **rare** constituents which this fertilizer abundantly possesses, and which are so **wholly and peculiarly essential** in an article of fertility, such as is here **reliably** represented. We would beg the attention of Farmers to its use the coming autumn for winter grain, and to the fact that it has arrested the **rot** in potatoes **after** decay has commenced. Price per ton of 2,000 lbs., $35. For all detailed particulars, analyses, directions and recommendations, apply or send to the office of the National Fertilizing Company, 37 Fulton St, New-York.

JOS. C. CANNING, Agent.

We would distinctly give notice, [as abortive imitations and attempted infringements upon our patents have already been made,] that we have **no connection whatever** with other Fertilizing Companies of **any character or name.** Aug. 19—w&m3mos.

WINEGAR'S CAPSTAN GATE.—I will put up my Gate, upon my traveling expenses being paid, and not exceeding four dollars for actual cost of the attachment; and unless it is a perfect success in every respect, I am to have nothing.

CALEB WINEGAR,
Sept. 9—w&m1t. Union Springs, Cayuga Co., N. Y.

GREAT AGRICULTURAL IMPROVEMENT!
Important to Every Farmer.
R. Nutting's Fanning and Assorting Machine.

This machine is the invention of Rufus Nutting of Randolph, Vermont, was patented in August, 1858, and is regarded by those who have seen it, as the paragon of its kind. It possesses many advantages as a winnowing machine over the ordinary mill, among which are the followlowing. It chaffs *faster* than the ordinary mill of the same size; it requires *less* power to operate it; it runs *much stiller*; it is *smaller* and *more portable*, and more *compact and symmetrical in form*; it does its work *better*, not only taking out the chaff and dirt, but all weed heads, sticks, short pieces of straw, &c., which depreciate the market value of grain, and obstruct smut mills and mill stones. The drive wheel is so situated with regard to the hopper, that the operator can regulate the feeding on to the sieves with his left hand, while turning with his right, thereby preventing the clogging of the sieves with straw, &c., (to which all mills are liable,) and allowing the grain to pass through *faster*. The wind strikes the grain in an ascending direction of about 45 degrees, which is much more favorable for separating light impurities, than the common nearly *horizontal* direction. The *whole or any part* of the wind may be shut off at any instant by the operator, without stopping or altering the velocity of the fan, or the shakes—different grain and seeds requiring a different ratio of wind to the shake. The distance or velocity of the shakes may be *increased or diminished* without altering the wind. The machine will not move about on the floor when in use, being kept in its place by the "*holdfast*," upon which the operator stands. It winnows not only all kinds of grain, beans and peas, but every kind of clover, grass, garden and flower seeds, and does it so perfectly that they cannot be improved by being sifted over by hand, as is usually practiced and *necessary* after the common mills. And it has no large or wide pieces of boards in its construction, (as in other mills,) to shrink and swell with the condition of the atmosphere, and thereby impede its free and easy operation.

But the great distinguishing merit of the machine is this—IT IS AN ASSORTING MACHINE—and as such it stands *unequalled and unrivalled*, challenging the admiration of all who see it operate—performing the operation on an entirely *new principle*, separating everything according to its *size*, *weight* and *shape*, and making as many varieties and grades of seed and grain as may be required, even as many as twenty if necessary, and depositing each by itself. It will take oats, cockle, grass and all foul seeds, from wheat, barley, &c., and assort the grain itself into grades, placing the large and plump, and the shrivelled and imperfect kernels, in separate apartments. *Thus the farmer is enabled to separate the choicest and plumpest grain for seed, and at the same time purify it from all foulness whatever.* What a desideratum is this! By the use of this machine, advantages of almost *infinite* value to *individuals*, *communities*, and *countries*, must follow—in the increase and improvement in the quality and quantity of crops, from sowing only the *largest*, *earliest ripened*, and *most perfect* seed—in the ridding of farms of the great variety of weeds now engendered by seeds sown with the grain, by sowing only that prepared by this machine, which is perfectly free from *all* foul seeds, and also thus save a vast amount of expensive labor in the subduing of weeds—in saving to the farmer for his poultry and stock, the shrivelled and broken grains which the millers now remove with their screens and smut machines—and in enabling agriculturists to raise all their seed-grain, grass, garden seeds, &c., for their own use.

Besides all these considerations, this machine, which, although then in an incomplete and unfinished state, was exhibited at five New-England Fairs, (three state and two county,) last autumn, and received the first and highest award and premium at each, and the universal commendation of the numbers who saw it; is very *simple* and *durable* in construction and operation, and at the same time can be afforded at a price within the reach of every farmer.

Rights to manufacture and use this machine are now for sale, and applications for them for the United States, (the New-England States excepted, (must be made to WALLACE WARREN, *Utica, N. Y.*, who has the sole disposal of the same in territory to suit purchasers.

Sept. 9—w2t.

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July 15—w&m3m

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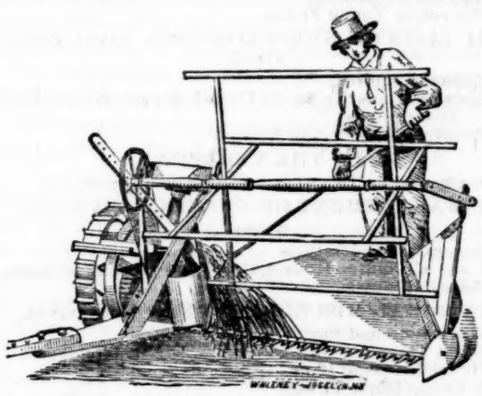
July 22—w3t—m3t.



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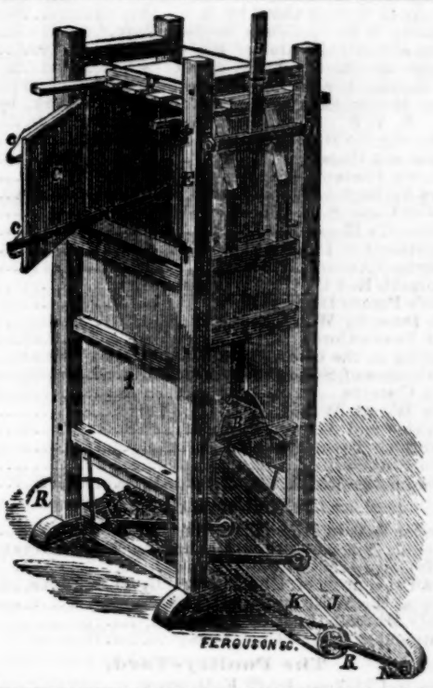

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